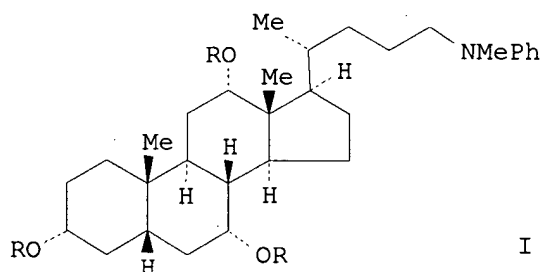


L3 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2003 ACS  
 AN 1998:221399 CAPLUS  
 DN 128:205033  
 TI Design and Synthesis of Potent Sensitizers of Gram-Negative Bacteria Based on a Cholic Acid Scaffolding  
 AU Li, Chunhong; Peters, Adam S.; Meredith, Erik L.; Allman, Glenn W.; Savage, Paul B.  
 CS Departments of Chemistry and Biochemistry and Microbiology, Brigham Young University, Provo, UT, 84602, USA  
 SO Journal of the American Chemical Society (1998), 120(12), 2961-2962  
 CODEN: JACSAT; ISSN: 0002-7863  
 PB American Chemical Society  
 DT Journal  
 LA English  
 CC 32-6 (Steroids)  
 Section cross-reference(s): 22, 34  
 GI



AB The outer membrane of Gram-neg. bacteria inhibits the passage of numerous antibiotics into the bacteria and thereby decreases the activity of many antibiotics against Gram-neg. strains. Lipid A is a primary component of the outer membrane of Gram-neg. bacteria and plays an essential role in cell wall integrity. Compds. that assoc. strongly with lipid A can disrupt the organization of the outer cell wall and sensitize Gram-neg. bacteria to antibiotics. Cholic acid derivs. I [R = CH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub>, CH<sub>2</sub>CH<sub>2</sub>NHC(NH<sub>2</sub>):NH, CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>NHC(NH<sub>2</sub>):NH] designed as lipid A-binding mols. that exhibit bacteriostatic and bactericidal activities and sensitize Gram-neg. bacteria to antibiotics were prepd. For example, the min. inhibitory concns. of erythromycin and novobiocin are lowered by factors of 70 and 500, resp., in the presence one of the cholic acid derivs. at a concn. of 2 .mu.g/mL. Structural variations in the cholic acid derivs. indicate that bacteriostatic and bactericidal activity can be sepd. from the ability of the compds. to sensitize bacteria to antibiotics.  
 ST Gram neg bacteria sensitizer prepn; cholic acid deriv prepn bacteria sensitization; bactericidal cholic acid deriv prepn; lipid A binding mol steroid prepn  
 IT Steroids, preparation  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent)  
 (cholane; design and synthesis of potent sensitizers of Gram-neg. bacteria based on a cholic acid backbone)  
 IT Antibacterial agents

## Conformation

## Molecular mechanics

(design and synthesis of potent sensitizers of Gram-neg. bacteria based on a cholic acid backbone)

## IT Lipid A

RL: RCT (Reactant); RACT (Reactant or reagent)

(design and synthesis of potent sensitizers of Gram-neg. bacteria based on a cholic acid backbone)

## IT Structure-activity relationship

(sensitization; design and synthesis of potent sensitizers of Gram-neg. bacteria based on a cholic acid backbone)

## IT Gram-negative bacteria

(sensitizers; design and synthesis of potent sensitizers of Gram-neg. bacteria based on a cholic acid backbone)

## IT Cooperative phenomena

(synergism; design and synthesis of potent sensitizers of Gram-neg. bacteria based on a cholic acid backbone)

## IT 86408-36-8, Polymyxin B nonapeptide

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)

(design and synthesis of potent sensitizers of Gram-neg. bacteria based on a cholic acid backbone)

## IT 203795-46-4P 203795-47-5P 203795-48-6P 203795-49-7P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent)

(design and synthesis of potent sensitizers of Gram-neg. bacteria based on a cholic acid backbone)

## IT 203795-53-3P 203795-54-4P 203795-55-5P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)

(design and synthesis of potent sensitizers of Gram-neg. bacteria based on a cholic acid backbone)

## IT 121379-26-8, 4-10-Polymyxin B1

RL: PRP (Properties)

(design and synthesis of potent sensitizers of Gram-neg. bacteria based on a cholic acid backbone)

## IT 103-67-3, N-Benzylmethylamine 111-83-1, 1-Bromooctane 1448-36-8, Methyl cholate

RL: RCT (Reactant); RACT (Reactant or reagent)

(design and synthesis of potent sensitizers of Gram-neg. bacteria based on a cholic acid backbone)

## IT 3758-71-2P 203795-50-0P 203795-51-1P 203795-52-2P 203795-56-6P

203795-57-7P 203795-58-8P 203795-61-3P 203795-64-6P 203795-67-9P

203795-70-4P 203795-73-7P 203795-76-0P 203795-79-3P 203795-82-8P

203795-85-1P 203795-88-4P 203795-91-9P 203795-93-1P 203795-94-2P

203795-95-3P 203795-96-4P 203796-02-5P 203796-03-6P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(design and synthesis of potent sensitizers of Gram-neg. bacteria based on a cholic acid backbone)

## IT 203795-97-5P 203795-98-6P 203795-99-7P 203796-01-4P

RL: SPN (Synthetic preparation); PREP (Preparation)

(design and synthesis of potent sensitizers of Gram-neg. bacteria based on a cholic acid backbone)

## IT 114-07-8, Erythromycin 303-81-1, Novobiocin

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)

(synergism of potent sensitizers of Gram-neg. bacteria based on a

cholic acid backbone with)

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09/930,316

Page 1

=> d ibib ab hitstr 1-5

L7 ANSWER 1 OF 5 USPATFULL  
 ACCESSION NUMBER: 2002:172518 USPATFULL  
 TITLE: Steroid derived antibiotics  
 INVENTOR(S): Savage, Paul B., Springville, UT, UNITED STATES  
 Li, Chunhong, Provo, UT, UNITED STATES

NUMBER	KIND	DATE
US 2002091278	A1	20020711
US 2001-930316	A1	20010815 (9)

PATENT INFORMATION: US 2002091278 A1 20020711  
 APPLICATION INFO.: US 2001-930316 A1 20010815 (9)  
 RELATED APPL. INFO.: Continuation-in-part of Ser. No. US 1999-234008, filed on 19 Jan 1999, PATENTED Continuation-in-part of Ser. No. WO 1998-US4489, filed on 6 Mar 1998, UNKNOWN

NUMBER	DATE
US 2000-225467P	20000815 (60)

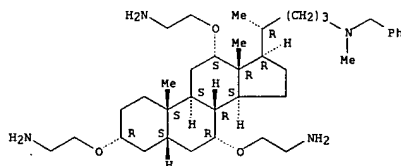
PRIORITY INFORMATION: US 2000-225467P 20000815 (60)  
 DOCUMENT TYPE: Utility  
 FILE SEGMENT: APPLICATION  
 LEGAL REPRESENTATIVE: JOHN W. FREEMAN, ESQ., Fish & Richardson P.C., 225 Franklin Street, Boston, MA, 02110-2804  
 NUMBER OF CLAIMS: 58  
 EXEMPLARY CLAIM: 1  
 NUMBER OF DRAWINGS: 10 Drawing Page(s)  
 LINE COUNT: 3770  
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A series of novel steroid derivatives are described. The steroid derivatives are antibacterial agents. The steroid derivatives also act to sensitize bacteria to other antibiotics including erythromycin and novobiocin.

IT 203795-46-4P 203795-47-5P 203795-48-6P  
 203795-49-7P 222022-08-4P  
 (prepn. of steroid derivs. as antibiotics)

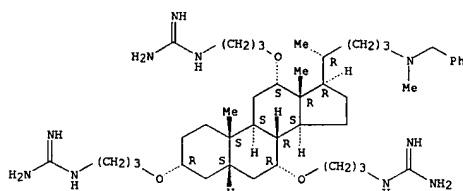
RN 203795-46-4 USPATFULL  
 CN Cholan-24-amine, 3,7,12-tris(2-aminoethoxy)-N-methyl-N-(phenylmethyl)-, (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



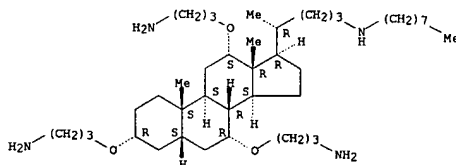
RN 203795-47-5 USPATFULL  
 CN Cholan-24-amine, 3,7,12-tris(3-aminopropoxy)-N-methyl-N-(phenylmethyl)-, (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

L7 ANSWER 1 OF 5 USPATFULL (Continued)



RN 222022-08-4 USPATFULL  
 CN Cholan-24-amine, 3,7,12-tris(3-aminopropoxy)-N-octyl-, (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

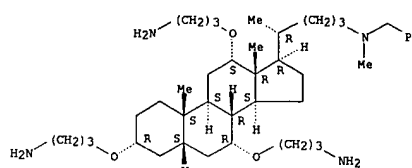
Absolute stereochemistry.



IT 203795-53-3P 203795-54-4P 203795-55-5P  
 222021-67-2P 222021-69-4P 222021-72-9P  
 222021-76-3P 222021-81-0P 222021-84-3P  
 222021-86-5P 222022-08-4P 222022-10-8P  
 222022-11-9P 222165-06-3P 222165-09-5P  
 222165-15-3P 222165-20-0P 241161-03-1P  
 241161-04-2P 241161-05-3P 241161-06-4P  
 241161-93-3P 241161-94-4P 241161-95-5P  
 241161-96-6P 202784-38-9P 202784-39-0P  
 202784-40-3P 202784-41-4P 202784-42-5P  
 202784-43-6P 202784-44-7P 202784-57-2P  
 348478-61-1P 400710-91-0P 400710-92-1P  
 400710-93-2P  
 (prepn. of steroid derivs. as antibiotics)  
 RN 203795-53-3 USPATFULL  
 CN Cholan-24-amine, 3,7,12-tris(2-aminoethoxy)-N-methyl-N-(phenylmethyl)-, (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

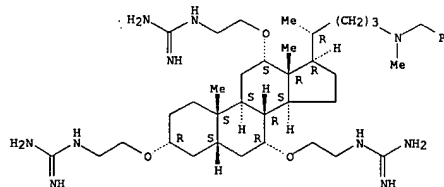
Absolute stereochemistry.

L7 ANSWER 1 OF 5 USPATFULL (Continued)  
 Absolute stereochemistry.



RN 203795-48-6 USPATFULL  
 CN Guanidine, N,N',N''-[[[(3.alpha.,5.beta.,7.alpha.,12.alpha.)-24-[methyl(phenylmethyl)amino]cholan-3,7,12-triyl]tris(oxy-2,1-ethanedyl)]tris- (9CI) (CA INDEX NAME)

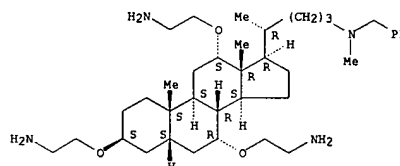
Absolute stereochemistry.



RN 203795-49-7 USPATFULL  
 CN Guanidine, N,N',N''-[[[(3.alpha.,5.beta.,7.alpha.,12.alpha.)-24-[methyl(phenylmethyl)amino]cholan-3,7,12-triyl]tris(oxy-3,1-propanediyl)]tris- (9CI) (CA INDEX NAME)

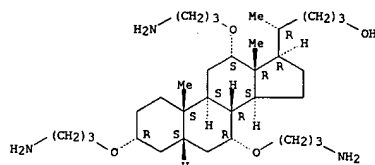
Absolute stereochemistry.

L7 ANSWER 1 OF 5 USPATFULL (Continued)



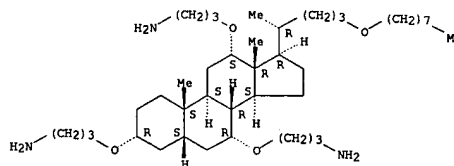
RN 203795-54-4 USPATFULL  
 CN Cholan-24-ol, 3,7,12-tris(3-aminopropoxy)-, (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 203795-55-5 USPATFULL  
 CN 1-Propanamine, 3,3',3''-[[[(3.alpha.,5.beta.,7.alpha.,12.alpha.)-24-(octyloxy)cholan-3,7,12-triyl]tris(oxy)]tris- (9CI) (CA INDEX NAME)

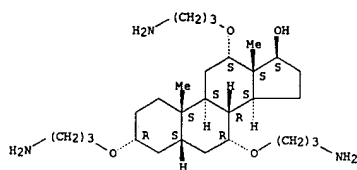
Absolute stereochemistry.



RN 222021-67-2 USPATFULL  
 CN Androstan-17-ol, 3,7,12-tris(3-aminopropoxy)-, (3.alpha.,5.beta.,7.alpha.,12.alpha.,17.beta.)- (9CI) (CA INDEX NAME)

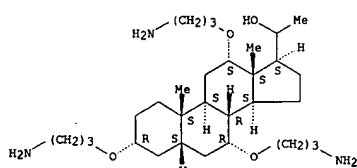
Absolute stereochemistry.

L7 ANSWER 1 OF 5 USPATFULL (Continued)



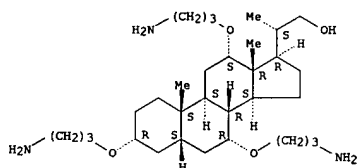
RN 222021-69-4 USPATFULL  
CN Pregnan-20-ol, 3,7,12-tris(3-aminopropoxy)-, (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



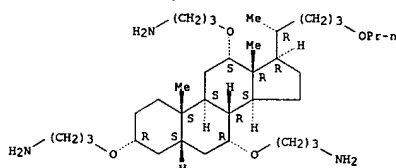
RN 222021-72-9 USPATFULL  
CN Pregnan-20-methanol, 3,7,12-tris(3-aminopropoxy)-, (3.alpha.,5.beta.,7.alpha.,12.alpha.,20S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



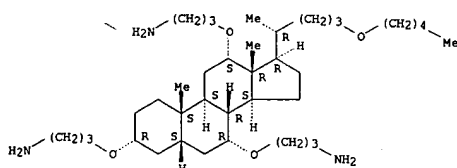
RN 222021-76-3 USPATFULL

L7 ANSWER 1 OF 5 USPATFULL (Continued)



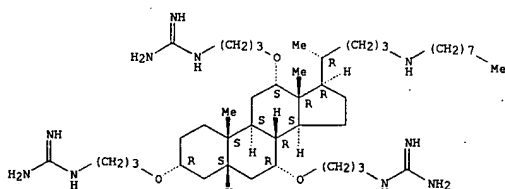
RN 222021-86-5 USPATFULL  
CN 1-Propanamine, 3,3',3''-[[[(3.alpha.,5.beta.,7.alpha.,12.alpha.)-24-(pentyloxy)choleane-3,7,12-triyl]tris(oxy)]tris- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 222022-09-5 USPATFULL  
CN Guanidine, N,N'',N''''-[[[(3.alpha.,5.beta.,7.alpha.,12.alpha.)-24-(octylamino)choleane-3,7,12-triyl]tris(oxy-3,1-propanediyl)]tris- (9CI) (CA INDEX NAME)

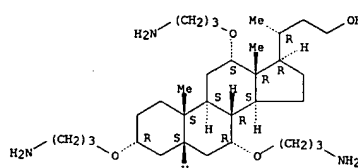
Absolute stereochemistry.



RN 222022-10-8 USPATFULL  
CN Cholan-24-amine, 3,7,12-tris(3-aminopropoxy)-,

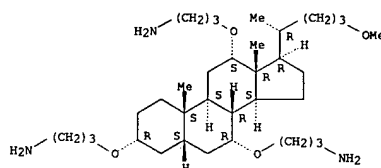
L7 ANSWER 1 OF 5 USPATFULL (Continued)

CN 24-Norcholeane-23-ol, 3,7,12-tris(3-aminopropoxy)-, (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)  
Absolute stereochemistry.



RN 222021-81-0 USPATFULL  
CN 1-Propanamine, 3,3',3''-[[[(3.alpha.,5.beta.,7.alpha.,12.alpha.)-24-methoxycholeane-3,7,12-triyl]tris(oxy)]tris- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

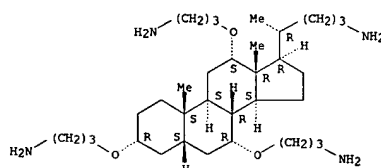


RN 222021-84-3 USPATFULL  
CN 1-Propanamine, 3,3',3''-[[[(3.alpha.,5.beta.,7.alpha.,12.alpha.)-24-methoxycholeane-3,7,12-triyl]tris(oxy)]tris- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

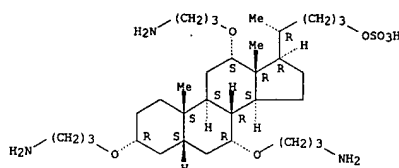
L7 ANSWER 1 OF 5 USPATFULL (Continued)  
(3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



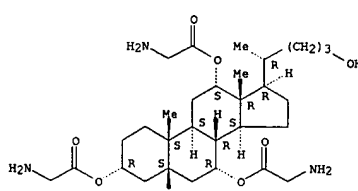
RN 222022-11-9 USPATFULL  
CN Cholan-24-ol, 3,7,12-tris(3-aminopropoxy)-, hydrogen sulfate (ester), (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



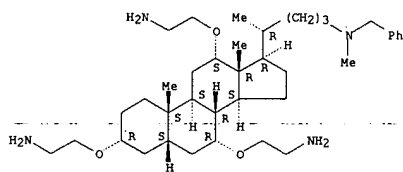
RN 222165-06-2 USPATFULL  
CN Glycine, (3.alpha.,5.beta.,7.alpha.,12.alpha.)-24-hydroxycholeane-3,7,12-triyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.





L7 ANSWER 1 OF 5 USPATFULL (Continued)

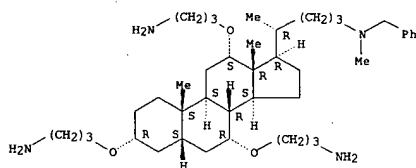


●x HCl

RN 241161-94-4 USPATFULL

CN Cholan-24-amine, 3,7,12-tris(3-aminopropoxy)-N-methyl-N-(phenylmethyl)-, hydrochloride, (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



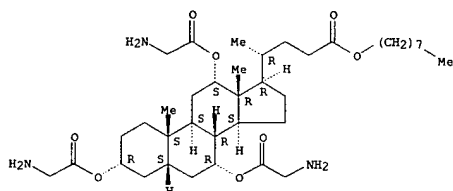
●x HCl

RN 241161-95-5 USPATFULL

CN Guanidine, N,N''',N''''-[[[(3.alpha.,5.beta.,7.alpha.,12.alpha.)-24-[methyl(phenylmethyl)amino]cholan-3,7,12-triyl]tris(oxy-2,1-ethanediyl)]tris-, hydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.

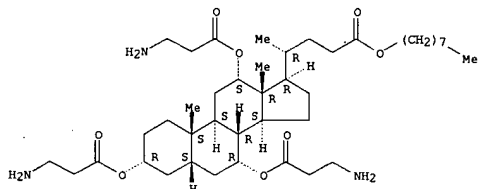
L7 ANSWER 1 OF 5 USPATFULL (Continued)



RN 302784-39-0 USPATFULL

CN Cholan-24-oic acid, 3,7,12-tris(3-amino-1-oxopropoxy)-, octyl ester, (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

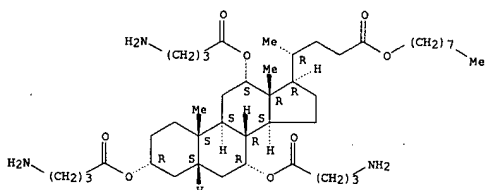
Absolute stereochemistry.



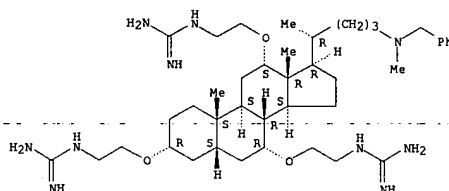
RN 302784-40-3 USPATFULL

CN Cholan-24-oic acid, 3,7,12-tris(4-amino-1-oxobutoxy)-, octyl ester, (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L7 ANSWER 1 OF 5 USPATFULL (Continued)

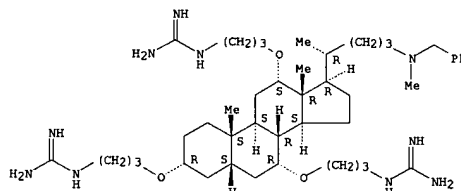


●x HCl

RN 241161-96-6 USPATFULL

CN Guanidine, N,N''',N''''-[[[(3.alpha.,5.beta.,7.alpha.,12.alpha.)-24-[methyl(phenylmethyl)amino]cholan-3,7,12-triyl]tris(oxy-3,1-propanediyl)]tris-, hydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.



●x HCl

RN 302784-38-9 USPATFULL

CN Cholan-24-oic acid, 3,7,12-tris[(aminoacetyl)oxy]-, octyl ester, (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

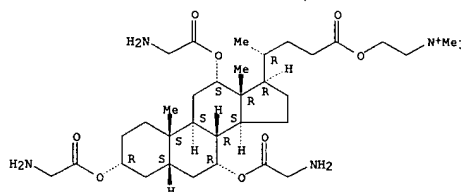
Absolute stereochemistry.

L7 ANSWER 1 OF 5 USPATFULL (Continued)

RN 302784-41-4 USPATFULL

CN Cholan-24-oic acid, 3,7,12-tris[(aminoacetyl)oxy]-, 2-(trimethylammonio)ethyl ester, (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

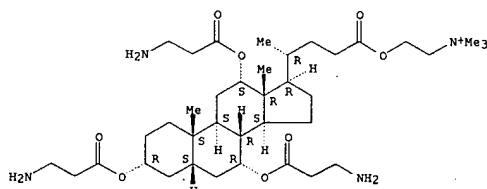
Absolute stereochemistry.



RN 302784-42-5 USPATFULL

CN Cholan-24-oic acid, 3,7,12-tris(3-amino-1-oxopropoxy)-, 2-(trimethylammonio)ethyl ester, (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



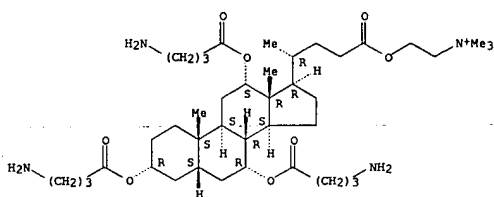
RN 302784-43-6 USPATFULL

CN Cholan-24-oic acid, 3,7,12-tris(4-amino-1-oxobutoxy)-, 2-(trimethylammonio)ethyl ester, (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

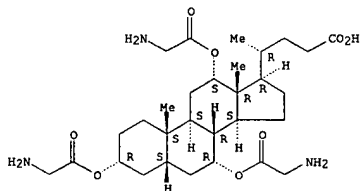


L7 ANSWER 1 OF 5 USPATFULL (Continued)



RN 302784-44-7 USPATFULL  
CN Cholan-24-olc acid, 3,7,12-tris[(aminocetyl)oxy]-, (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



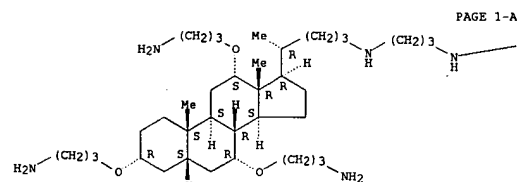
RN 302784-57-2 USPATFULL  
CN Cholan-3,7,12-triol, 24-[methyl(phenylmethyl)amino]-, tris(4-aminobutanoate) (ester), (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

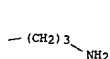
L7 ANSWER 1 OF 5 USPATFULL (Continued)

RN 400710-92-1 USPATFULL  
CN 1,3-Propanediamine, N-(3-aminopropyl)-N'-[(3.alpha.,5.beta.,7.alpha.,12.alpha.)-3,7,12-tris(3-aminopropoxy)cholan-24-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



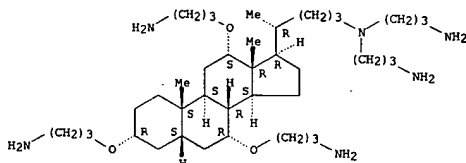
PAGE 1-A



PAGE 1-B

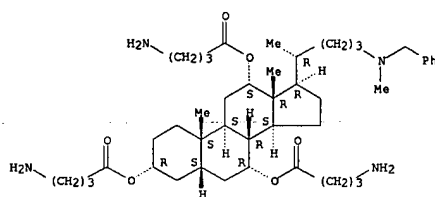
RN 400710-93-2 USPATFULL  
CN 1,3-Propanediamine, N-(3-aminopropyl)-N'-[(3.alpha.,5.beta.,7.alpha.,12.alpha.)-3,7,12-tris(3-aminopropoxy)cholan-24-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



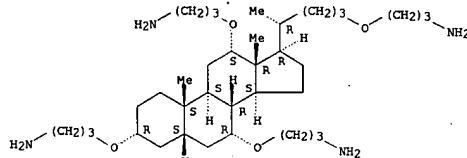
IT 203795-51-1P 203795-67-9P 203795-70-4P  
203795-73-7P 203795-76-0P 203795-79-3P  
203795-82-8P 203795-84-2P 203795-95-3P  
203795-96-4P 203795-02-5P 222021-93-4P  
222022-02-8P 222022-06-2P 222022-07-3P  
222022-12-0P 222165-65-3P 222165-70-0P  
241161-89-7P 241161-90-0P 241161-91-1P  
241161-92-2P 284467-84-1P 284467-86-3P  
284467-87-4P 302784-45-8P 302784-46-9P  
302784-47-0P 302784-48-1P 302784-51-5P  
400710-94-3P 400710-95-4P 400710-96-5P

L7 ANSWER 1 OF 5 USPATFULL (Continued)



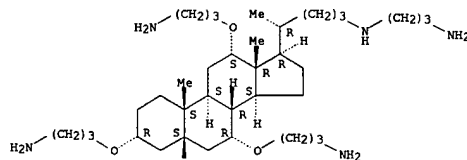
RN 349478-61-1 USPATFULL  
CN 1-Propanamine, 3,3',3'',3'''-[(3.alpha.,5.beta.,7.alpha.,12.alpha.)-cholan-3,7,12,24-tetra-yltetrakis(oxy)]tetrakis- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 400710-91-0 USPATFULL  
CN 1,3-Propanediamine, N-[(3.alpha.,5.beta.,7.alpha.,12.alpha.)-3,7,12-tris(3-aminopropoxy)cholan-24-yl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

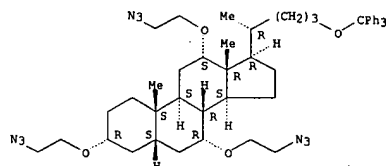


L7 ANSWER 1 OF 5 USPATFULL (Continued)  
400710-97-6P 400710-98-7P 400711-01-5P  
439940-49-5P 439940-51-9P 439940-52-0P  
439940-53-1P

(prepn. of steroid derivs. as antibiotics)

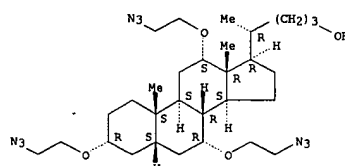
RN 203795-51-1 USPATFULL  
CN Cholan-3,7,12-tris(2-azidoethoxy)-24-(triphenylmethoxy)-, (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 203795-67-9 USPATFULL  
CN Cholan-24-ol, 3,7,12-tris(2-azidoethoxy)-, (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

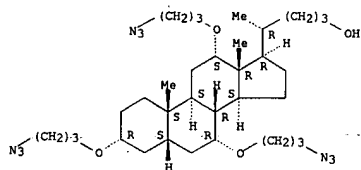
Absolute stereochemistry.



RN 203795-70-4 USPATFULL  
CN Cholan-24-ol, 3,7,12-tris(3-azidopropoxy)-, (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

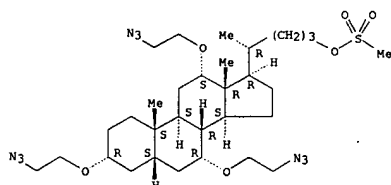
L7 ANSWER 1 OF 5 USPATFULL (Continued)



RN 203795-73-7 USPATFULL

CN Cholan-24-ol, 3,7,12-tris(2-azidoethoxy)-, methanesulfonate (ester), (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

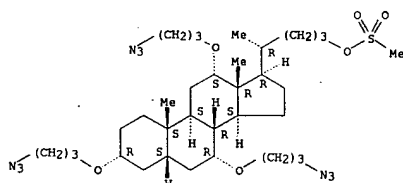
Absolute stereochemistry.



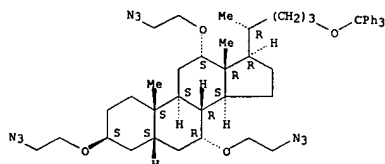
RN 203795-76-0 USPATFULL

CN Cholan-24-ol, 3,7,12-tris(3-azidopropoxy)-, methanesulfonate (ester), (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



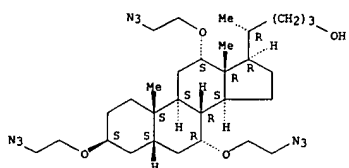
L7 ANSWER 1 OF 5 USPATFULL (Continued)



RN 203795-95-3 USPATFULL

CN Cholan-24-ol, 3,7,12-tris(2-azidoethoxy)-, (3.beta.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

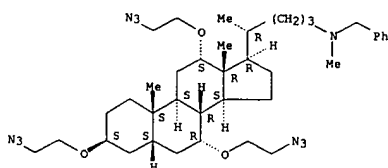
Absolute stereochemistry.



RN 203795-96-4 USPATFULL

CN Cholan-24-amine, 3,7,12-tris(2-azidoethoxy)-N-methyl-N-(phenylmethyl)-, (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 203796-02-5 USPATFULL

CN Cholan-24-amine, 3,7,12-tris(3-azidopropoxy)-24-(octyloxy)-, (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

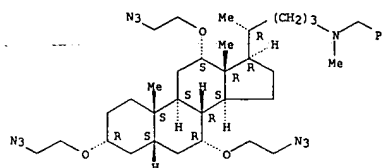
Absolute stereochemistry.

L7 ANSWER 1 OF 5 USPATFULL (Continued)

RN 203795-79-3 USPATFULL

CN Cholan-24-amine, 3,7,12-tris(2-azidoethoxy)-N-methyl-N-(phenylmethyl)-, (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

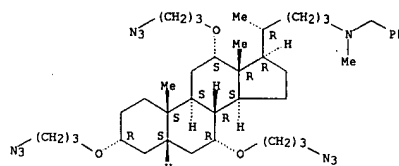
Absolute stereochemistry.



RN 203795-82-8 USPATFULL

CN Cholan-24-amine, 3,7,12-tris(3-azidopropoxy)-N-methyl-N-(phenylmethyl)-, (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

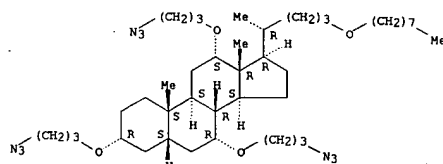


RN 203795-94-2 USPATFULL

CN Cholan-24-amine, 3,7,12-tris(2-azidoethoxy)-24-(triphenylmethoxy)-, (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

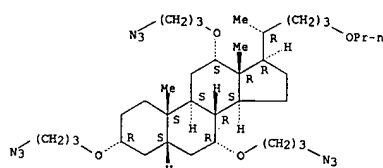
L7 ANSWER 1 OF 5 USPATFULL (Continued)



RN 222021-93-4 USPATFULL

CN Cholan-24-amine, 3,7,12-tris(3-azidopropoxy)-24-propoxy-, (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

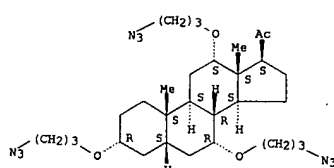
Absolute stereochemistry.



RN 222022-02-8 USPATFULL

CN Pregnan-20-one, 3,7,12-tris(3-azidopropoxy)-, (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

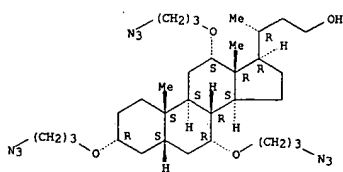


RN 222022-06-2 USPATFULL

CN 24-Norcholan-23-ol, 3,7,12-tris(3-azidopropoxy)-, (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

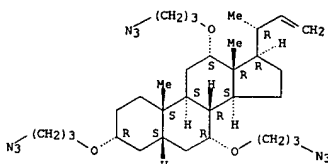
Absolute stereochemistry.

L7 ANSWER 1 OF 5 USPATFULL (Continued)



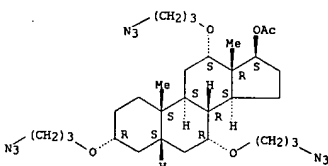
RN 222022-07-3 USPATFULL  
CN 24-Norchol-22-ene, 3,7,12-tris(3-azidopropoxy)-, (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



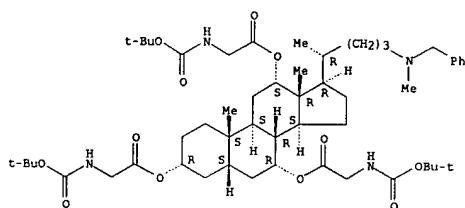
RN 222022-12-0 USPATFULL  
CN Androstan-17-ol, 3,7,12-tris(3-azidopropoxy)-, acetate (ester), (3.alpha.,5.beta.,7.alpha.,12.alpha.,17.beta.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



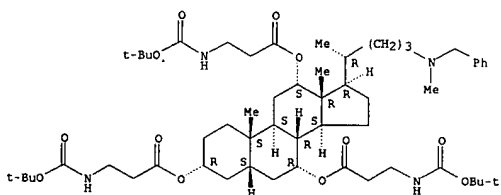
RN 222165-65-3 USPATFULL

L7 ANSWER 1 OF 5 USPATFULL (Continued)



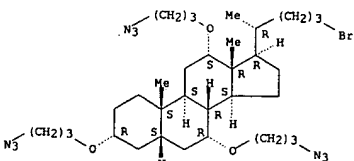
RN 241161-90-0 USPATFULL  
CN .beta.-Alanine, N-[(1,1-dimethylethoxy)carbonyl]-, (3.alpha.,5.beta.,7.alpha.,12.alpha.)-24-[methyl(phenylmethyl)amino]cholan-3,7,12-triyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 241161-91-1 USPATFULL  
CN Cholan-24-ol, 3,7,12-tris(3-azidopropoxy)-24-bromo-, (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

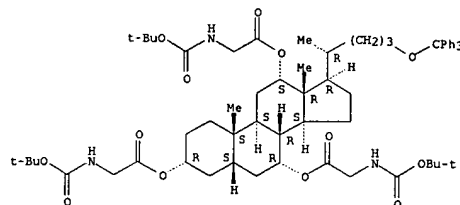
Absolute stereochemistry.



L7 ANSWER 1 OF 5 USPATFULL (Continued)

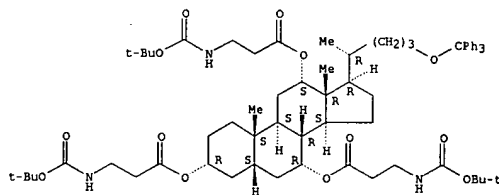
CN Glycine, N-[(1,1-dimethylethoxy)carbonyl]-, (3.alpha.,5.beta.,7.alpha.,12.alpha.)-24-(triphenylmethoxy)cholan-3,7,12-triyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 222165-70-0 USPATFULL  
CN .beta.-Alanine, N-[(1,1-dimethylethoxy)carbonyl]-, (3.alpha.,5.beta.,7.alpha.,12.alpha.)-24-(triphenylmethoxy)cholan-3,7,12-triyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



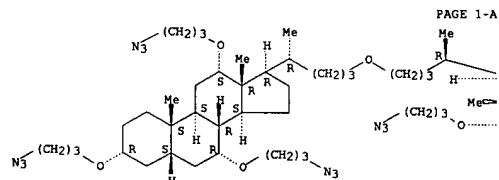
RN 241161-89-7 USPATFULL  
CN Glycine, N-[(1,1-dimethylethoxy)carbonyl]-, (3.alpha.,5.beta.,7.alpha.,12.alpha.)-24-[methyl(phenylmethyl)amino]cholan-3,7,12-triyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L7 ANSWER 1 OF 5 USPATFULL (Continued)

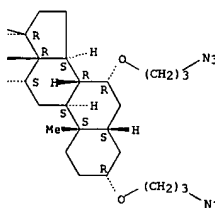
RN 241161-92-2 USPATFULL  
CN Cholan-24-ol, 3,7,12-tris(3-azidopropoxy)-, (3.alpha.,5.beta.,7.alpha.,12.alpha.)-24-[methyl(phenylmethyl)amino]cholan-3,7,12-triyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



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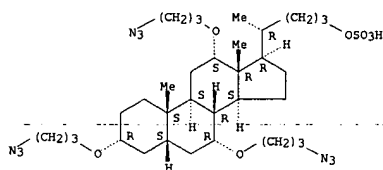
PAGE 1-B



RN 284467-84-1 USPATFULL  
CN Cholan-24-ol, 3,7,12-tris(3-azidopropoxy)-, hydrogen sulfate (ester), (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

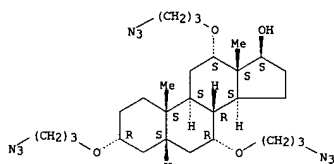
L7 ANSWER 1 OF 5 USPATFULL (Continued)



RN 284467-86-3 USPATFULL

CN Androstane-17-ol, 3,7,12-tris(3-azidopropoxy)-, (3.alpha.,5.beta.,7.alpha.,12.alpha.,17.beta.)- (9CI) (CA INDEX NAME)

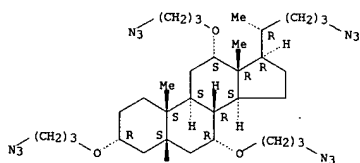
Absolute stereochemistry.



RN 284467-87-4 USPATFULL

CN Cholan-24-azido-3,7,12-tris(3-azidopropoxy)-, (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

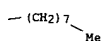
Absolute stereochemistry.



RN 302784-45-8 USPATFULL

L7 ANSWER 1 OF 5 USPATFULL (Continued)

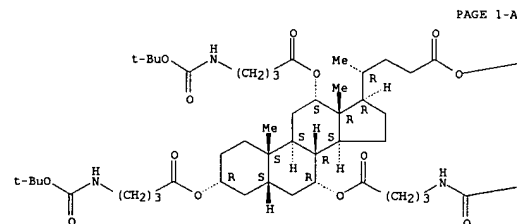
PAGE 1-B



RN 302784-47-0 USPATFULL

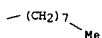
CN Cholan-24-oic acid, 3,7,12-tris[4-[[[(1,1-dimethylethoxy)carbonyl]amino]-1-oxobutoxy]-, octyl ester, (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



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RN 302784-48-1 USPATFULL

CN Cholan-24-oic acid, 3,7,12-tris[4-[[[(1,1-dimethylethoxy)carbonyl]amino]acet yl]oxy]-, phenylmethyl ester, (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

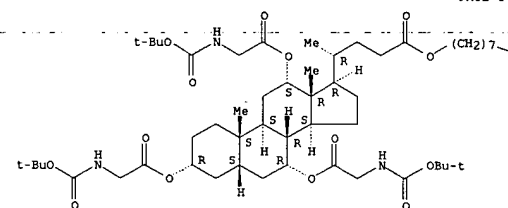
Absolute stereochemistry.

L7 ANSWER 1 OF 5 USPATFULL (Continued)

CN Cholan-24-oic acid, 3,7,12-tris[4-[[[(1,1-dimethylethoxy)carbonyl]amino]acet yl]oxy]-, octyl ester, (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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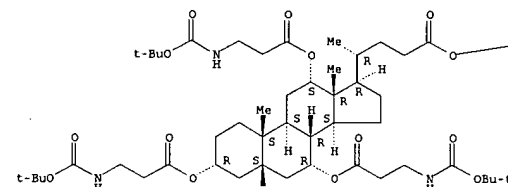


RN 302784-46-9 USPATFULL

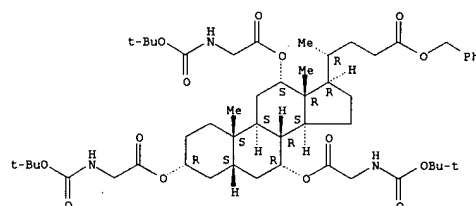
CN Cholan-24-oic acid, 3,7,12-tris[3-[[[(1,1-dimethylethoxy)carbonyl]amino]-1-oxopropoxy]-, octyl ester, (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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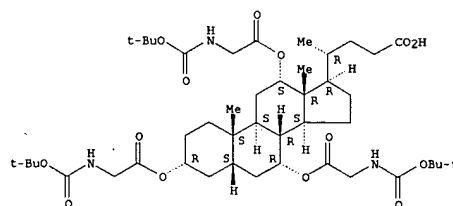
L7 ANSWER 1 OF 5 USPATFULL (Continued)



RN 302784-51-6 USPATFULL

CN Cholan-24-oic acid, 3,7,12-tris[4-[[[(1,1-dimethylethoxy)carbonyl]amino]acet yl]oxy]-, (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

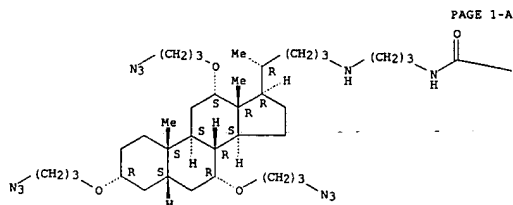


RN 400710-94-3 USPATFULL

CN Carbamic acid, [3-[[[(3.alpha.,5.beta.,7.alpha.,12.alpha.)-3,7,12-tris(3-azidopropoxy)cholan-24-yl]amino]propyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L7 ANSWER 1 OF 5 USPATFULL (Continued)

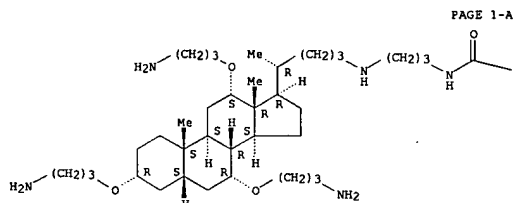


-OBU-t

RN 400710-95-4 USPATFULL

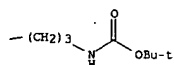
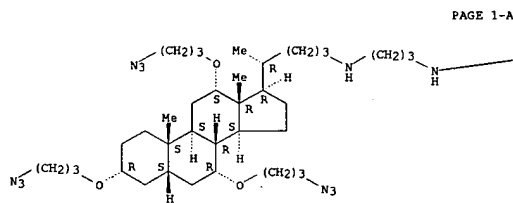
CN Carbamic acid, [3-[[[3.alpha.,5.beta.,7.alpha.,12.alpha.)-3,7,12-tris(3-azidopropoxy)cholan-24-yl]amino]propyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



-OBU-t

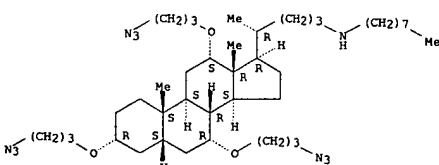
L7 ANSWER 1 OF 5 USPATFULL (Continued)



RN 400711-01-5 USPATFULL

CN Cholan-24-amine, 3,7,12-tris(3-azidopropoxy)-N-octyl-, (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 439940-49-5 USPATFULL

CN Cholan-24-oic acid, 3,7,12-tris[(((1,1-dimethylethoxy)carbonyl)amino)acet yloxy]-, 2-(dimethylamino)ethyl ester, (3.alpha.,5.beta.,7.alpha.,12.alpha. pha.)- (9CI) (CA INDEX NAME)

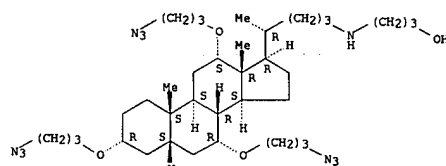
Absolute stereochemistry.

L7 ANSWER 1 OF 5 USPATFULL (Continued)

RN 400710-96-5 USPATFULL

CN 1-Propanol, 3-[[[3.alpha.,5.beta.,7.alpha.,12.alpha.)-3,7,12-tris(3-azidopropoxy)cholan-24-yl]amino]- (9CI) (CA INDEX NAME)

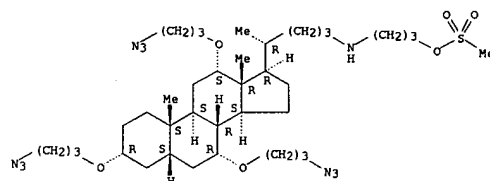
Absolute stereochemistry.



RN 400710-97-6 USPATFULL

CN 1-Propanol, 3-[[[3.alpha.,5.beta.,7.alpha.,12.alpha.)-3,7,12-tris(3-azidopropoxy)cholan-24-yl]amino]-, methanesulfonate (ester) (9CI) (CA INDEX NAME)

Absolute stereochemistry.

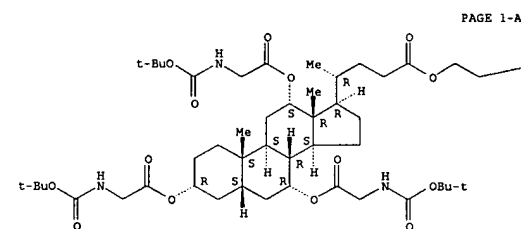


RN 400710-98-7 USPATFULL

CN Carbamic acid, [3-[[[3.alpha.,5.beta.,7.alpha.,12.alpha.)-3,7,12-tris(3-azidopropoxy)cholan-24-yl]amino]propyl]amino]propyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

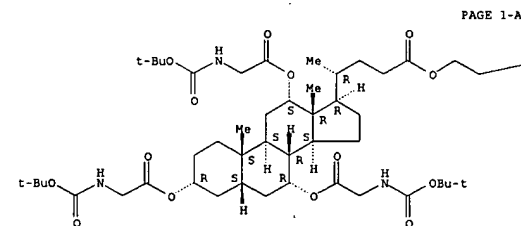
L7 ANSWER 1 OF 5 USPATFULL (Continued)

-NMe<sub>2</sub>

RN 439940-51-9 USPATFULL

CN Cholan-24-oic acid, 3,7,12-tris[(((1,1-dimethylethoxy)carbonyl)amino)acet yloxy]-, 2-(trimethylammonio)ethyl ester, iodide, (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L7 ANSWER 1 OF 5 USPATFULL (Continued)

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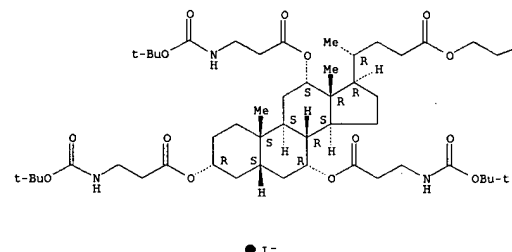
N<sup>+</sup>Me<sub>3</sub>

RN 439940-52-0 USPATFULL

CN Cholan-24-oic acid, 3,7,12-tris[3-[[[1,1-dimethylethoxy)carbonyl]amino]-1-oxopropoxy]-, 2-(trimethylammonio)ethyl ester, iodide, (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

N<sup>+</sup>Me<sub>3</sub>

RN 439940-53-1 USPATFULL

CN Cholan-24-oic acid, 3,7,12-tris[4-[[[1,1-dimethylethoxy)carbonyl]amino]-1-oxobutoxy]-, 2-(trimethylammonio)ethyl ester, iodide, (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L7 ANSWER 2 OF 5 USPATFULL

ACCESSION NUMBER: 2002:112898 USPATFULL  
 TITLE: Targeted oligonucleotide conjugates  
 INVENTOR(S): Manoharan, Muthiah, Carlsbad, CA, UNITED STATES  
 PATENT ASSIGNEE(S): ISIS Pharmaceuticals, Inc. (U.S. corporation)

NUMBER	KIND	DATE
US 2002058639	A1	20020516
US 6525031	B2	20030225
US 2001-934424	A1	20010821 (9)

APPLICATION INFO.: Division of Ser. No. US 1998-37753, filed on 16 Jun 1998, GRANTED, Pat. No. US 6300319

RELATED APPLN. INFO.: Utility

DOCUMENT TYPE: APPLICATION

FILE SEGMENT: Woodcock Washburn Kurtz, Mackiewicz & Norris LLP, One Liberty Place - 46th Floor, Philadelphia, PA, 19103

LEGAL REPRESENTATIVE: 40

NUMBER OF CLAIMS: 1

EXEMPLARY CLAIM: 1415

LINE COUNT: 1415

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides improved ingress of therapeutic and other moieties into cellular targets. In accordance with preferred embodiments, complexes are provided which carry primary moieties, chiefly therapeutic moieties, to such target cells. Such complexes preferably feature cell surface receptor ligands to provide specificity. Such ligands are preferably bound to primary moieties through polyfunctional manifold compounds.

IT 252769-11-2P 252769-12-3P 252769-13-4P  
 252769-14-5P 252769-15-6P

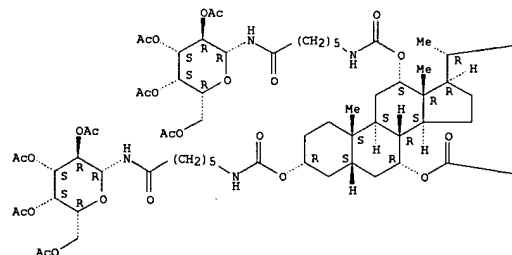
(prepn. of targeted oligonucleotide conjugates useful as drug delivery agents)

RN 252769-11-2 USPATFULL

CN Cholan-3,7,12-triol, 24-[[[1,1-dimethylethyl)diphenylsilyl]oxy]-, tris[[6-oxo-6-[[[2,3,4,6-tetra-O-acetyl-β-D-galactopyranosyl]amino]hexyl]carbamate], (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

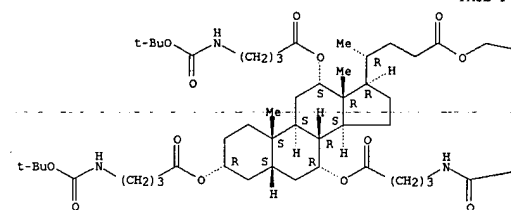
Absolute stereochemistry.

PAGE 1-A



L7 ANSWER 1 OF 5 USPATFULL (Continued)

PAGE 1-A

I<sup>-</sup>

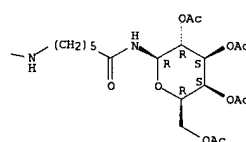
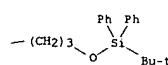
PAGE 1-B

N<sup>+</sup>Me<sub>3</sub>

OBu-t

L7 ANSWER 2 OF 5 USPATFULL (Continued)

PAGE 1-B

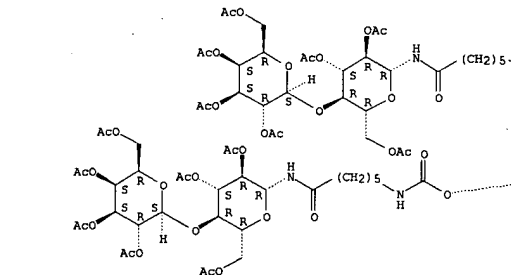


RN 252769-12-3 USPATFULL

CN Cholan-3,7,12-triol, 24-[[[1,1-dimethylethyl)diphenylsilyl]oxy]-, tris[[6-oxo-6-[[[2,3,4,6-tetra-O-acetyl-β-D-galactopyranosyl]amino]hexyl]carbamate], (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

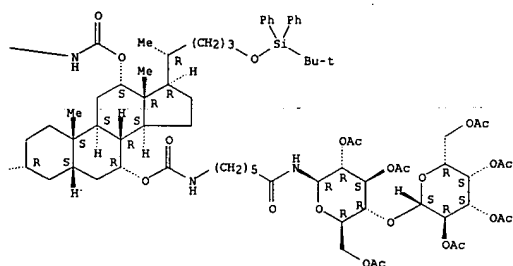
Absolute stereochemistry.

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L7 ANSWER 2 OF 5 USPATFULL (Continued)

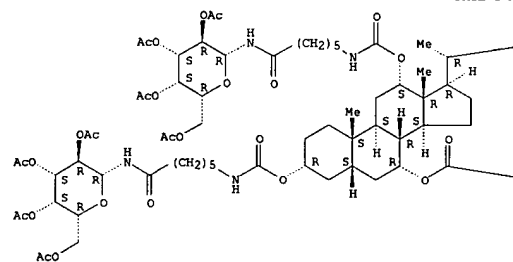
PAGE 1-B



RN 252769-13-4 USPATFULL  
 CN Choline-3,7,12,24-tetrol, 3,7,12-tris[[6-oxo-6-[(2,3,4,6-tetra-O-acetyl-β-D-galactopyranosyl)amino]hexyl]carbamate], (3.α.,5.β.,7.α.,12.α.)- (9CI) (CA INDEX NAME)

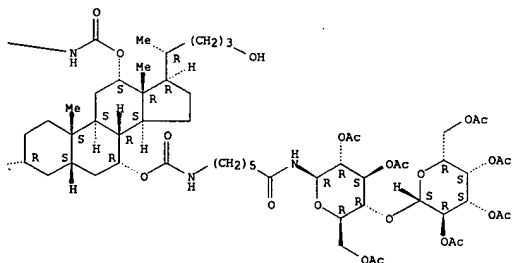
Absolute stereochemistry.

PAGE 1-A



L7 ANSWER 2 OF 5 USPATFULL (Continued)

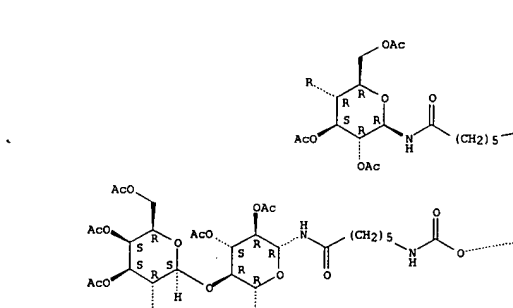
PAGE 1-B



RN 252769-15-6 USPATFULL  
 CN Choline-3,7,12-triol, 24-[[bis(4-methoxyphenyl)phenylmethoxy]-tris[[6-oxo-6-[[2,3,6-tri-O-acetyl-4-O-(2,3,4,6-tetra-O-acetyl-β-D-galactopyranosyl)-β-D-glucopyranosyl]amino]hexyl]carbamate], (3.α.,5.β.,7.α.,12.α.)- (9CI) (CA INDEX NAME)

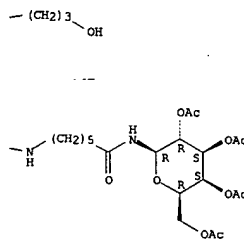
Absolute stereochemistry.

PAGE 1-A



L7 ANSWER 2 OF 5 USPATFULL (Continued)

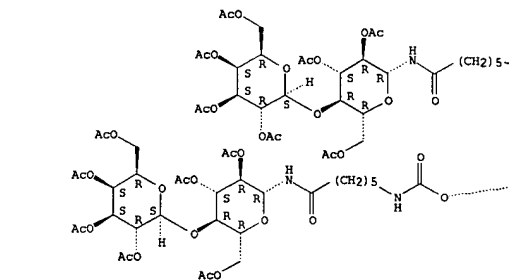
PAGE 1-B



RN 252769-14-5 USPATFULL  
 CN Choline-3,7,12,24-tetrol, 3,7,12-tris[[6-oxo-6-[[2,3,6-tri-O-acetyl-4-O-(2,3,4,6-tetra-O-acetyl-β-D-galactopyranosyl)-β-D-glucopyranosyl]amino]hexyl]carbamate], (3.α.,5.β.,7.α.,12.α.)- (9CI) (CA INDEX NAME)

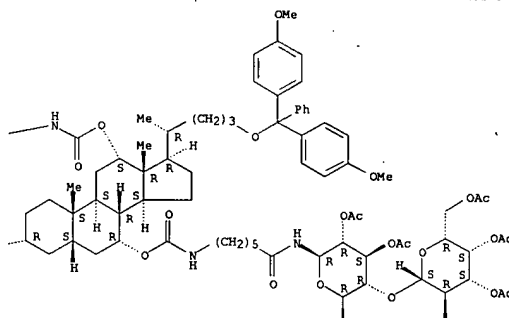
Absolute stereochemistry.

PAGE 1-A

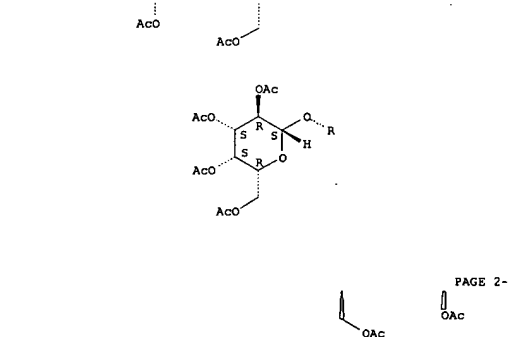


L7 ANSWER 2 OF 5 USPATFULL (Continued)

PAGE 1-B



PAGE 2-A



PAGE 2-B

L7 ANSWER 3 OF 5 USPATFULL  
 ACCESSION NUMBER: 2002:39914 USPATFULL  
 TITLE: Steroid derived antibiotics  
 INVENTOR(S): Savage, Paul B., Springville, UT, United States  
 Li, Chunhong, Provo, UT, United States  
 PATENT ASSIGNEE(S): Brigham Young University, Provo, UT, United States  
 (U.S. corporation)

NUMBER	KIND	DATE
US 6350738	B1	20020226
US 1999-234008		19990119 (9)
Continuation-in-part of Ser. No. WO 1998-US4489, filed on 6 Mar 1998		
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	GRANTED	
PRIMARY EXAMINER:	Badio, Barbara P.	
LEGAL REPRESENTATIVE:	Fish & Richardson P.C.	
NUMBER OF CLAIMS:	14	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	8 Drawing Figure(s); 5 Drawing Page(s)	
LINE COUNT:	3087	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

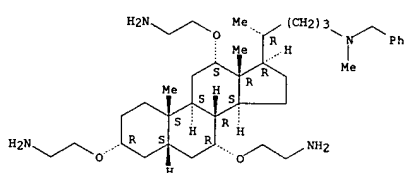
AB A series of novel steroid derivatives are described. The steroid derivatives are antibacterial agents. The steroid derivatives also act to sensitize bacteria to other antibiotics including erythromycin and novobiocin.

IT 203795-46-4P 203795-47-5P 203795-48-6P  
 203795-49-7P  
 (prepn. of steroidal antibiotics)

RN 203795-46-4 USPATFULL

CN Cholan-24-amine, 3,7,12-tris(2-aminoethoxy)-N-methyl-N-(phenylmethyl)-, (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

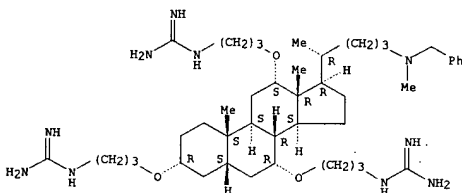


RN 203795-47-5 USPATFULL

CN Cholan-24-amine, 3,7,12-tris(3-aminopropoxy)-N-methyl-N-(phenylmethyl)-, (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L7 ANSWER 3 OF 5 USPATFULL (Continued)



IT 203795-53-3P 203795-54-4P 203795-55-5P

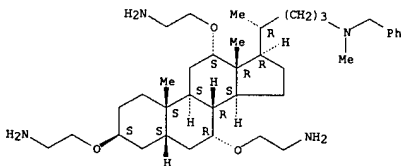
222021-69-4P 241161-83-1P 241161-84-2P  
 241161-85-3P 241161-86-4P 241161-93-3P  
 241161-94-4P 241161-95-5P 241161-96-6P

(prepn. of steroidal antibiotics)

RN 203795-53-3 USPATFULL

CN Cholan-24-amine, 3,7,12-tris(2-aminoethoxy)-N-methyl-N-(phenylmethyl)-, (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

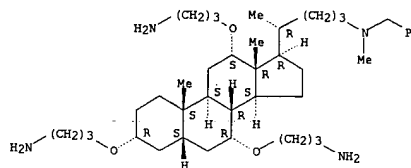


RN 203795-54-4 USPATFULL

CN Cholan-24-ol, 3,7,12-tris(3-aminopropoxy)-, (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

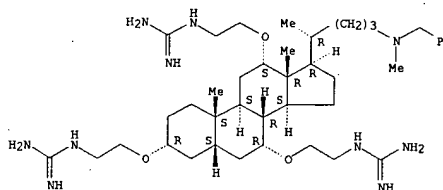
L7 ANSWER 3 OF 5 USPATFULL (Continued)



RN 203795-48-6 USPATFULL

CN Guanidine, N,N',N''-[[[(3.alpha.,5.beta.,7.alpha.,12.alpha.)-24-[methyl(phenylmethyl)amino]cholan-3,7,12-triyl]tris(oxy-2,1-ethanediyl)]tris- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

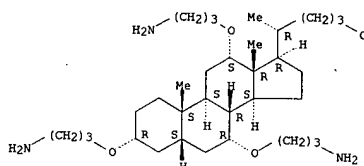


RN 203795-49-7 USPATFULL

CN Guanidine, N,N',N''-[[[(3.alpha.,5.beta.,7.alpha.,12.alpha.)-24-[methyl(phenylmethyl)amino]cholan-3,7,12-triyl]tris(oxy-3,1-propanediyl)]tris- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

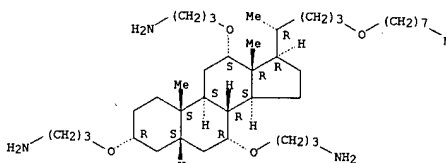
L7 ANSWER 3 OF 5 USPATFULL (Continued)



RN 203795-55-5 USPATFULL

CN 1-Propanamine, 3,3',3''-[[[(3.alpha.,5.beta.,7.alpha.,12.alpha.)-24-(octyloxy)cholan-3,7,12-triyl]tris(oxy)]tris- (9CI) (CA INDEX NAME)

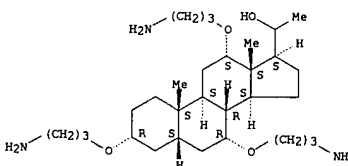
Absolute stereochemistry.



RN 222021-69-4 USPATFULL

CN Pregnan-20-ol, 3,7,12-tris(3-aminopropoxy)-, (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



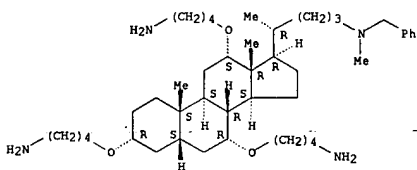
RN 241161-83-1 USPATFULL

CN Cholan-24-amine, 3,7,12-tris(4-aminobutoxy)-N-methyl-N-(phenylmethyl)-, (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

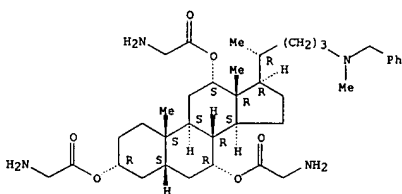


L7 ANSWER 3 OF 5 USPATFULL (Continued)



RN 241161-84-2 USPATFULL  
CN Glycine, (3.alpha.,5.beta.,7.alpha.,12.alpha.)-24-[methyl(phenylmethyl)amino]cholane-3,7,12-triyl ester, trihydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.



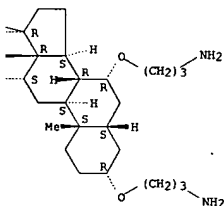
● 3 HCl

RN 241161-85-3 USPATFULL  
CN .beta.-Alanine, (3.alpha.,5.beta.,7.alpha.,12.alpha.)-24-[methyl(phenylmethyl)amino]cholane-3,7,12-triyl ester, trihydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.

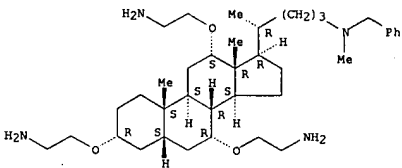
L7 ANSWER 3 OF 5 USPATFULL (Continued)

PAGE 1-B



RN 241161-93-3 USPATFULL  
CN Cholan-24-amine, 3,7,12-tris(2-aminopropoxy)-N-methyl-N-(phenylmethyl)-, hydrochloride, (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

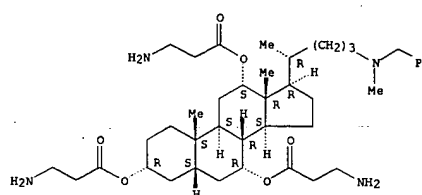


● x HCl

RN 241161-94-4 USPATFULL  
CN Cholan-24-amine, 3,7,12-tris(3-aminopropoxy)-N-methyl-N-(phenylmethyl)-, hydrochloride, (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

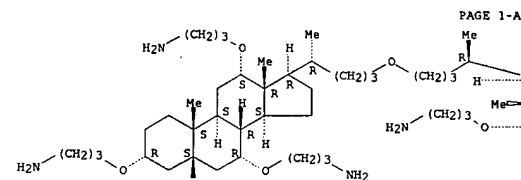
L7 ANSWER 3 OF 5 USPATFULL (Continued)



● 3 HCl

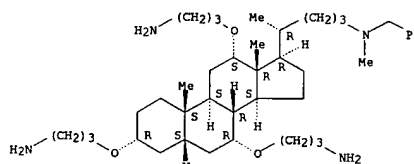
RN 241161-86-4 USPATFULL  
CN 1-Propanamine, 3,3',3'',3''',3''',3''''-[oxybis(3.alpha.,5.beta.,7.alpha.,12.alpha.)-cholane-24,3,7,12-tetrayltris(oxy)]hexakis- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



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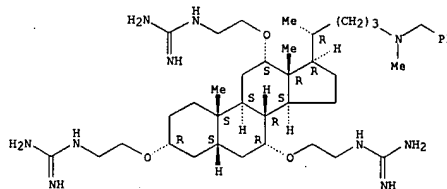
L7 ANSWER 3 OF 5 USPATFULL (Continued)



● x HCl

RN 241161-95-5 USPATFULL  
CN Guanidine, N,N''',N''''-[[[(3.alpha.,5.beta.,7.alpha.,12.alpha.)-24-[methyl(phenylmethyl)amino]cholane-3,7,12-triyl]tris(oxy-2,1-ethanediyl)]tris-, hydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.

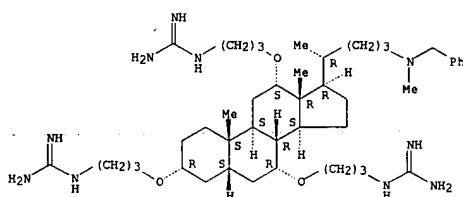


● x HCl

RN 241161-96-6 USPATFULL  
CN Guanidine, N,N''',N''''-[[[(3.alpha.,5.beta.,7.alpha.,12.alpha.)-24-[methyl(phenylmethyl)amino]cholane-3,7,12-triyl]tris(oxy-3,1-propanediyl)]tris-, hydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L7 ANSWER 3 OF 5 USPATFULL (Continued)



● x HCl

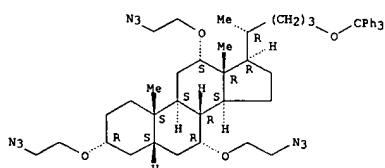
IT 203795-51-1P 203795-67-9P 203795-70-4P  
 203795-73-7P 203795-76-0P 203795-79-3P  
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 241161-89-7P 241161-90-0P 241161-91-1P  
 241161-92-2P

(prepn. of steroidal antibiotics)

RN 203795-51-1 USPATFULL

CN Cholan-24-ol, 3,7,12-tris(2-azidoethoxy)-24-(triphenylmethoxy)-, (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 203795-67-9 USPATFULL

CN Cholan-24-ol, 3,7,12-tris(2-azidoethoxy)-, (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

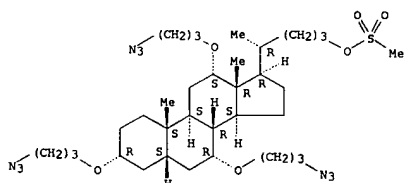
Absolute stereochemistry.

L7 ANSWER 3 OF 5 USPATFULL (Continued)

RN 203795-76-0 USPATFULL

CN Cholan-24-ol, 3,7,12-tris(3-azidopropoxy)-, methanesulfonate (ester), (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

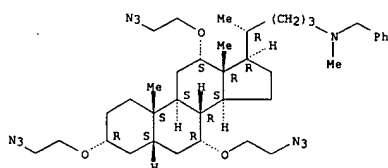
Absolute stereochemistry.



RN 203795-79-3 USPATFULL

CN Cholan-24-amine, 3,7,12-tris(2-azidoethoxy)-N-methyl-N-(phenylmethyl)-, (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

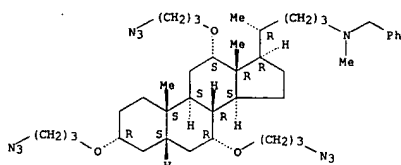
Absolute stereochemistry.



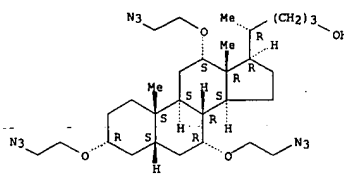
RN 203795-82-8 USPATFULL

CN Cholan-24-amine, 3,7,12-tris(3-azidopropoxy)-N-methyl-N-(phenylmethyl)-, (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



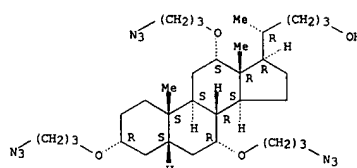
L7 ANSWER 3 OF 5 USPATFULL (Continued)



RN 203795-70-4 USPATFULL

CN Cholan-24-ol, 3,7,12-tris(3-azidopropoxy)-, (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

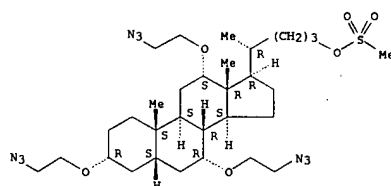
Absolute stereochemistry.



RN 203795-73-7 USPATFULL

CN Cholan-24-ol, 3,7,12-tris(2-azidoethoxy)-, methanesulfonate (ester), (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

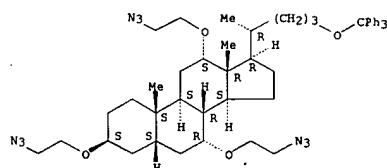


L7 ANSWER 3 OF 5 USPATFULL (Continued)

RN 203795-94-2 USPATFULL

CN Cholan-24-ol, 3,7,12-tris(2-azidoethoxy)-24-(triphenylmethoxy)-, (3.beta.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

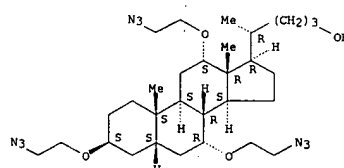
Absolute stereochemistry.



RN 203795-95-3 USPATFULL

CN Cholan-24-ol, 3,7,12-tris(2-azidoethoxy)-, (3.beta.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

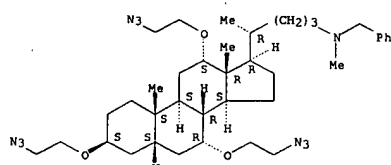
Absolute stereochemistry.



RN 203795-96-4 USPATFULL

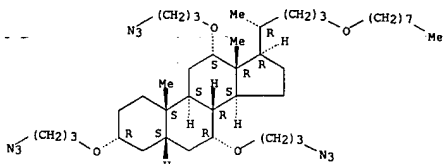
CN Cholan-24-amine, 3,7,12-tris(2-azidoethoxy)-N-methyl-N-(phenylmethyl)-, (3.beta.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

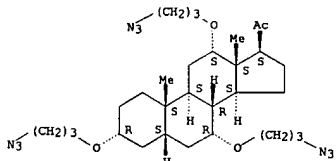


L7 ANSWER 3 OF 5 USPATFULL (Continued)

RN 203796-02-5 USPATFULL  
 CN Choline, 3,7,12-tris(3-azidopropoxy)-24-(octyloxy)-,  
 (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)  
 Absolute stereochemistry.

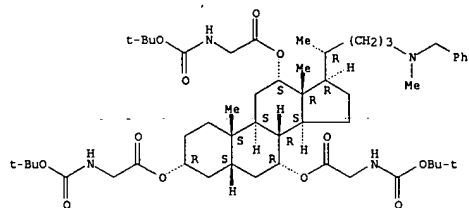


RN 222022-02-8 USPATFULL  
 CN Pregnan-20-one, 3,7,12-tris(3-azidopropoxy)-,  
 (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)  
 Absolute stereochemistry.

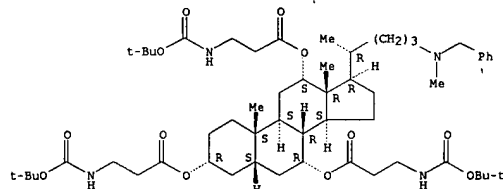


RN 241161-89-7 USPATFULL  
 CN Glycine, N-[(1,1-dimethylethoxy)carbonyl]-, (3.alpha.,5.beta.,7.alpha.,12.alpha.)-24-[methyl(phenylmethyl)amino]choline-3,7,12-triyl ester (9CI) (CA INDEX NAME)  
 Absolute stereochemistry.

L7 ANSWER 3 OF 5 USPATFULL (Continued)

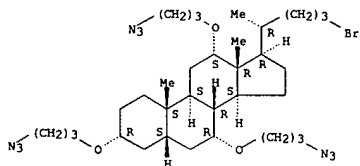


RN 241161-90-0 USPATFULL  
 CN .beta.-Alanine, N-[(1,1-dimethylethoxy)carbonyl]-,  
 (3.alpha.,5.beta.,7.alpha.,12.alpha.)-24-[methyl(phenylmethyl)amino]chol  
 ane-3,7,12-triyl ester (9CI) (CA INDEX NAME)  
 Absolute stereochemistry.

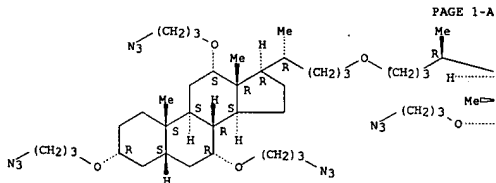


RN 241161-91-1 USPATFULL  
 CN Choline, 3,7,12-tris(3-azidopropoxy)-24-bromo-,  
 (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)  
 Absolute stereochemistry.

L7 ANSWER 3 OF 5 USPATFULL (Continued)

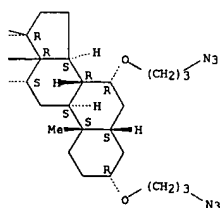


RN 241161-92-2 USPATFULL  
 CN Choline, 24,24'-oxybis[3,7,12-tris(3-azidopropoxy)-,  
 (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (3'.alpha.,5'.beta.,7'.alpha.,12'.alpha.)- (9CI) (CA INDEX NAME)  
 Absolute stereochemistry.



PAGE 1-A

PAGE 1-B



L7 ANSWER 3 OF 5 USPATFULL (Continued)

L7 ANSWER 4 OF 5 USPATFULL  
 ACCESSION NUMBER: 2002:32554 USPATFULL  
 TITLE: Steroid derived antibiotics  
 INVENTOR(S): Savage, Paul B., Springville, UT, UNITED STATES  
 Li, Chunhong, Provo, UT, UNITED STATES  
 PATENT ASSIGNEE(S): Brigham Young University, a Utah corporation (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002019376	A1	20020214
FILE SEGMENT:	US 6486148	B2	20021126
APPLICATION INFO.:	US 2001-927926	A1	20010810 (9)
RELATED APPLN. INFO.:	Division of Ser. No. US 1999-234008, filed on 19 Jan 1999, PENDING Continuation-in-part of Ser. No. WO 1998-US4489, filed on 6 Mar 1998, UNKNOWN		
DOCUMENT TYPE:	Utility		
LEGAL REPRESENTATIVE:	APPLICATION JOHN W. FREEMAN, ESQ., Fish & Richardson P.C., 225 Franklin Street, Boston, MA, 02110-2804		
NUMBER OF CLAIMS:	107		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	5 Drawing Page(s)		
LINE COUNT:	3583		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A series of novel steroid derivatives are described. The steroid derivatives are antibacterial agents. The steroid derivatives also act to sensitize bacteria to other antibiotics including erythromycin and novobiocin.

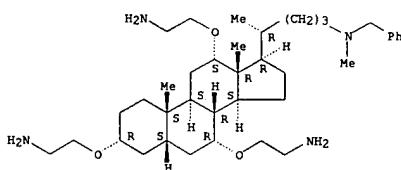
IT 203795-46-4P 203795-47-5P 203795-48-6P  
 203795-49-7P

(prepn. of steroidal antibiotics)

RN 203795-46-4 USPATFULL

CN Cholan-24-amine, 3,7,12-tris(2-aminoethoxy)-N-methyl-N-(phenylmethyl)-, (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

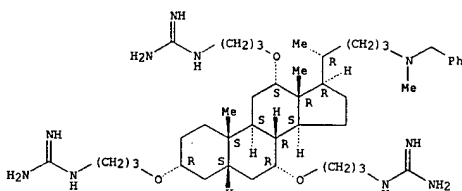


RN 203795-47-5 USPATFULL

CN Cholan-24-amine, 3,7,12-tris(3-aminopropoxy)-N-methyl-N-(phenylmethyl)-, (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L7 ANSWER 4 OF 5 USPATFULL (Continued)



IT 203795-53-3P 203795-54-4P 203795-55-5P

222021-69-4P 241161-83-1P 241161-84-2P

241161-85-3P 241161-86-4P 241161-93-3P

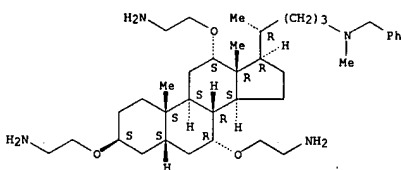
241161-94-4P 241161-95-5P 241161-96-6P

(prepn. of steroidal antibiotics)

RN 203795-53-3 USPATFULL

CN Cholan-24-amine, 3,7,12-tris(2-aminoethoxy)-N-methyl-N-(phenylmethyl)-, (3.beta.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

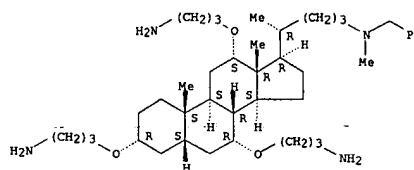


RN 203795-54-4 USPATFULL

CN Cholan-24-ol, 3,7,12-tris(3-aminopropoxy)-, (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

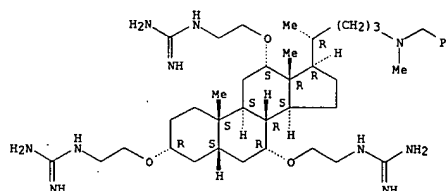
L7 ANSWER 4 OF 5 USPATFULL (Continued)



RN 203795-48-6 USPATFULL

CN Guanidine, N,N',N''-[[[(3.alpha.,5.beta.,7.alpha.,12.alpha.)-24-[methyl(phenylmethyl)amino]cholan-3,7,12-triyl]tris(oxy-2,1-ethanediyl)]tris- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

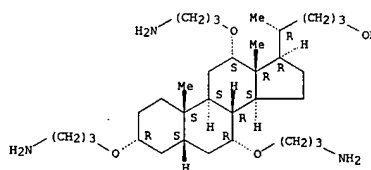


RN 203795-49-7 USPATFULL

CN Guanidine, N,N',N''-[[[(3.alpha.,5.beta.,7.alpha.,12.alpha.)-24-[methyl(phenylmethyl)amino]cholan-3,7,12-triyl]tris(oxy-3,1-propanediyl)]tris- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

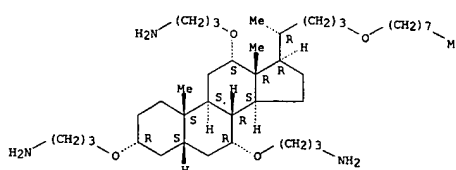
L7 ANSWER 4 OF 5 USPATFULL (Continued)



RN 203795-55-5 USPATFULL

CN 1-Propanamine, 3,3',3''-[[[(3.alpha.,5.beta.,7.alpha.,12.alpha.)-24-(octyloxy)cholan-3,7,12-triyl]tris(oxy)]tris- (9CI) (CA INDEX NAME)

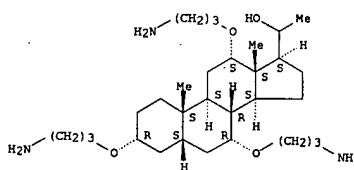
Absolute stereochemistry.



RN 222021-69-4 USPATFULL

CN Pregnan-20-ol, 3,7,12-tris(3-aminopropoxy)-, (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

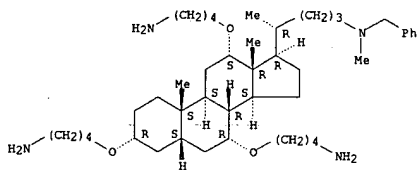


RN 241161-83-1 USPATFULL

CN Cholan-24-amine, 3,7,12-tris(4-aminobutoxy)-N-methyl-N-(phenylmethyl)-, (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

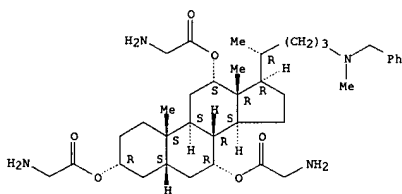
Absolute stereochemistry.

L7 ANSWER 4 OF 5 USPATFULL (Continued)



RN 241161-84-2 USPATFULL  
CN Glycine, (3.alpha.,5.beta.,7.alpha.,12.alpha.)-24-[methyl(phenylmethyl)amino]cholane-3,7,12-triyl ester, trihydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.



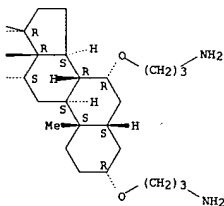
● 3 HCl

RN 241161-85-3 USPATFULL  
CN .beta.-Alanine, (3.alpha.,5.beta.,7.alpha.,12.alpha.)-24-[methyl(phenylmethyl)amino]cholane-3,7,12-triyl ester, trihydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.

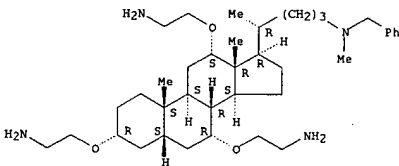
L7 ANSWER 4 OF 5 USPATFULL (Continued)

PAGE 1-B



RN 241161-93-3 USPATFULL  
CN Cholan-24-amine, 3,7,12-tris(2-aminoethoxy)-N-methyl-N-(phenylmethyl)-, hydrochloride, (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

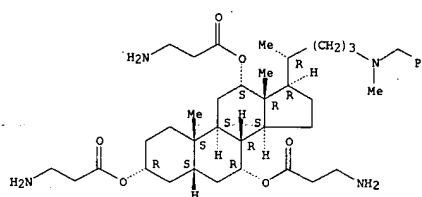


● x HCl

RN 241161-94-4 USPATFULL  
CN Cholan-24-amine, 3,7,12-tris(3-aminopropoxy)-N-methyl-N-(phenylmethyl)-, hydrochloride, (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

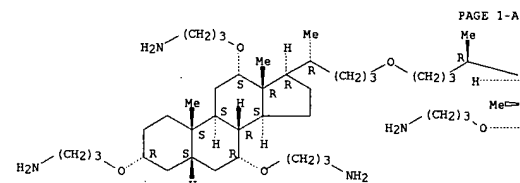
L7 ANSWER 4 OF 5 USPATFULL (Continued)



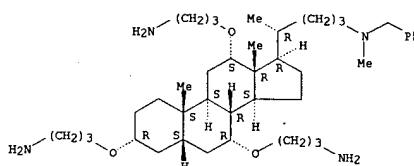
● 3 HCl

RN 241161-86-4 USPATFULL  
CN 1-Propanamine, 3,3',3'',3''',3''',3''''-[oxybis[(3.alpha.,5.beta.,7.alpha.,12.alpha.)-cholane-24,3,7,12-tetrayltris(oxy)]]hexakis- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



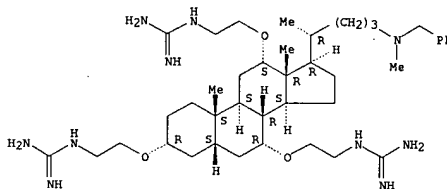
L7 ANSWER 4 OF 5 USPATFULL (Continued)



● x HCl

RN 241161-95-5 USPATFULL  
CN Guanidine, N,N''',N''''-[[[(3.alpha.,5.beta.,7.alpha.,12.alpha.)-24-[methyl(phenylmethyl)amino]cholane-3,7,12-triyl]tris(oxy-2,1-ethanediyl)]tris-, hydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.

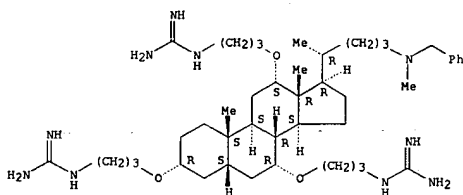


● x HCl

RN 241161-96-6 USPATFULL  
CN Guanidine, N,N''',N''''-[[[(3.alpha.,5.beta.,7.alpha.,12.alpha.)-24-[methyl(phenylmethyl)amino]cholane-3,7,12-triyl]tris(oxy-3,1-propanediyl)]tris-, hydrochloride (9CI) (CA INDEX NAME)

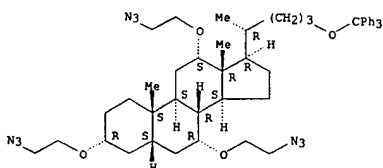
Absolute stereochemistry.

L7 ANSWER 4 OF 5 USPATFULL (Continued)



● x HCl

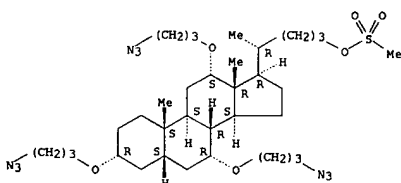
IT 203795-51-1P 203795-67-9P 203795-70-4P  
 203795-73-7P 203795-76-0P 203795-79-3P  
 203795-82-8P 203795-94-2P 203795-95-3P  
 203795-96-4P 203796-02-5P 222022-02-8P  
 241161-89-7P 241161-90-0P 241161-91-1P  
 241161-92-2P  
 (prepn. of steroidal antibiotics)  
 RN 203795-51-1 USPATFULL  
 CN Cholan-24-ol, 3,7,12-tris(2-azidoethoxy)-24-(triphenylmethoxy)-,  
 (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)  
 Absolute stereochemistry.



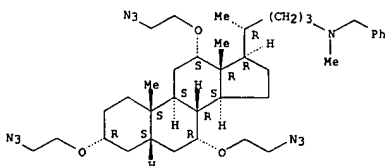
RN 203795-67-9 USPATFULL  
 CN Cholan-24-ol, 3,7,12-tris(2-azidoethoxy)-, (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)  
 Absolute stereochemistry.

L7 ANSWER 4 OF 5 USPATFULL (Continued)

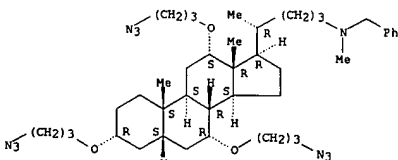
RN 203795-76-0 USPATFULL  
 CN Cholan-24-ol, 3,7,12-tris(3-azidopropoxy)-, methanesulfonate (ester),  
 (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)  
 Absolute stereochemistry.



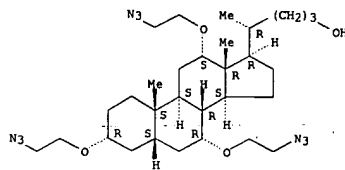
RN 203795-79-3 USPATFULL  
 CN Cholan-24-amine, 3,7,12-tris(2-azidoethoxy)-N-methyl-N-(phenylmethyl)-,  
 (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)  
 Absolute stereochemistry.



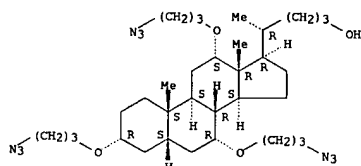
RN 203795-82-8 USPATFULL  
 CN Cholan-24-amine, 3,7,12-tris(3-azidopropoxy)-N-methyl-N-(phenylmethyl)-,  
 (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)  
 Absolute stereochemistry.



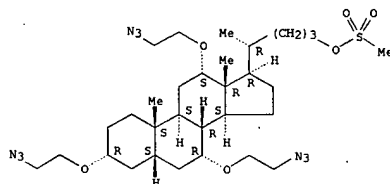
L7 ANSWER 4 OF 5 USPATFULL (Continued)



RN 203795-70-4 USPATFULL  
 CN Cholan-24-ol, 3,7,12-tris(3-azidopropoxy)-, (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)  
 Absolute stereochemistry.

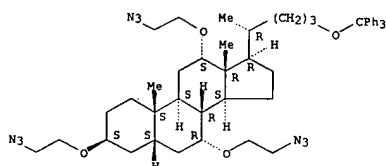


RN 203795-73-7 USPATFULL  
 CN Cholan-24-ol, 3,7,12-tris(2-azidoethoxy)-, methanesulfonate (ester),  
 (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)  
 Absolute stereochemistry.

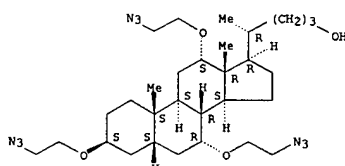


L7 ANSWER 4 OF 5 USPATFULL (Continued)

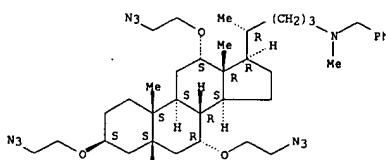
RN 203795-94-2 USPATFULL  
 CN Cholan-24-ol, 3,7,12-tris(2-azidoethoxy)-24-(triphenylmethoxy)-,  
 (3.beta.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)  
 Absolute stereochemistry.



RN 203795-95-3 USPATFULL  
 CN Cholan-24-ol, 3,7,12-tris(2-azidoethoxy)-, (3.beta.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)  
 Absolute stereochemistry.



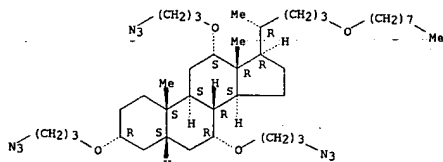
RN 203795-96-4 USPATFULL  
 CN Cholan-24-amine, 3,7,12-tris(2-azidoethoxy)-N-methyl-N-(phenylmethyl)-,  
 (3.beta.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)  
 Absolute stereochemistry.



L7 ANSWER 4 OF 5 USPATFULL (Continued)

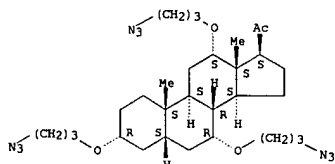
RN 203796-02-5 USPATFULL  
 CN Cholane, 3,7,12-tris(3-azidopropoxy)-24-(octyloxy)-,  
 (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 222022-02-8 USPATFULL  
 CN Pregnan-20-one, 3,7,12-tris(3-azidopropoxy)-,  
 (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

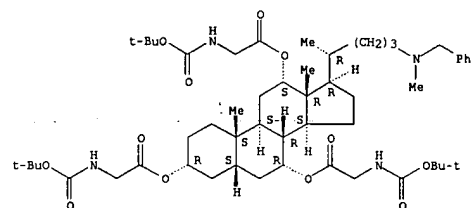
Absolute stereochemistry.



RN 241161-89-7 USPATFULL  
 CN Glycine, N-[(1,1-dimethylethoxy)carbonyl]-, (3.alpha.,5.beta.,7.alpha.,12.alpha.)-24-[methyl(phenylmethyl)amino]cholane-3,7,12-triyl ester (9CI)  
 (CA INDEX NAME)

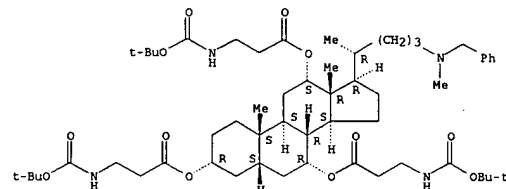
Absolute stereochemistry.

L7 ANSWER 4 OF 5 USPATFULL (Continued)



RN 241161-90-0 USPATFULL  
 CN .beta.-Alanine, N-[(1,1-dimethylethoxy)carbonyl]-,  
 (3.alpha.,5.beta.,7.alpha.,12.alpha.)-24-[methyl(phenylmethyl)amino]chol  
 ane-3,7,12-triyl ester (9CI) (CA INDEX NAME)

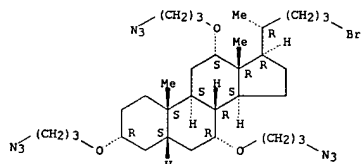
Absolute stereochemistry.



RN 241161-91-1 USPATFULL  
 CN Cholane, 3,7,12-tris(3-azidopropoxy)-24-bromo-,  
 (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

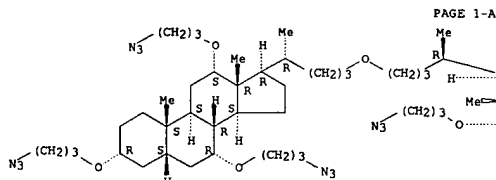
Absolute stereochemistry.

L7 ANSWER 4 OF 5 USPATFULL (Continued)



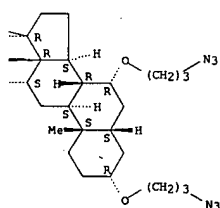
RN 241161-92-2 USPATFULL  
 CN Cholane, 24,24'-oxybis[3,7,12-tris(3-azidopropoxy)-,  
 (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (3'.alpha.,5'.beta.,7'.alpha.,12'.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



PAGE 1-A

PAGE 1-B



L7 ANSWER 4 OF 5 USPATFULL (Continued)

L7 ANSWER 5 OF 5 USPATFULL  
 ACCESSION NUMBER: 2001:173573 USPATFULL  
 TITLE: Targeted oligonucleotide conjugates  
 INVENTOR(S): Manoharan, Muthiah, Carlsbad, CA, United States  
 PATENT ASSIGNEE(S): Isis Pharmaceuticals, Inc., Carlsbad, CA, United States  
 (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6300319	B1	20011009
APPLICATION INFO.:	US 1998-97753		19980616 (9)
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	GRANTED		
PRIMARY EXAMINER:	Riley, Jezia		
LEGAL REPRESENTATIVE:	Woodcock Washburn Kurtz Mackiewicz & Norris LLP		
NUMBER OF CLAIMS:	25		
EXEMPLARY CLAIM:	1		
LINE COUNT:	1642		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides improved ingress of therapeutic and other moieties into cellular targets. In accordance with preferred embodiments, complexes are provided which carry primary moieties, chiefly therapeutic moieties, to such target cells. Such complexes preferably feature cell surface receptor ligands to provide specificity. Such ligands are preferably bound to primary moieties through polyfunctional manifold compounds.

IT 252769-11-2P 252769-12-3P 252769-13-4P  
 252769-14-5P 252769-15-6P  
 (prepn. of targeted oligonucleotide conjugates useful as drug delivery agents)

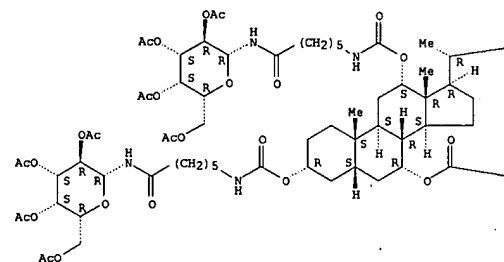
RN 252769-11-2 USPATFULL

CN Choline-3,7,12-triol, 24-[[[(1,1-dimethylethyl)diphenylsilyl]oxy]-, tris[[6-oxo-6-[(2,3,4,6-tetra-O-acetyl-.beta.-D-galactopyranosyl)amino]hexyl]carbamate], (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

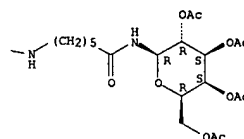
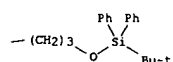
Absolute stereochemistry.

L7 ANSWER 5 OF 5 USPATFULL (Continued)

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PAGE 1-B



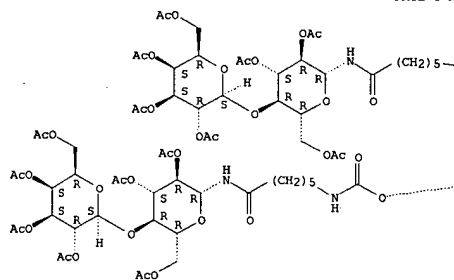
RN 252769-12-3 USPATFULL

CN Choline-3,7,12-triol, 24-[[[(1,1-dimethylethyl)diphenylsilyl]oxy]-, tris[[6-oxo-6-[(2,3,6-tri-O-acetyl-4-O-(2,3,4,6-tetra-O-acetyl-.beta.-D-galactopyranosyl)-.beta.-D-glucopyranosyl)amino]hexyl]carbamate], (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

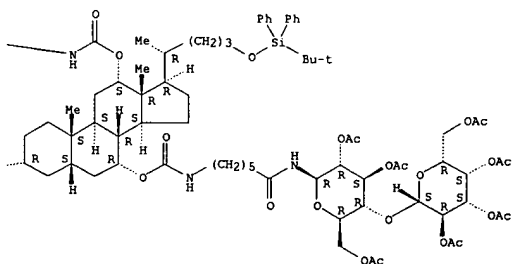
Absolute stereochemistry.

L7 ANSWER 5 OF 5 USPATFULL (Continued)

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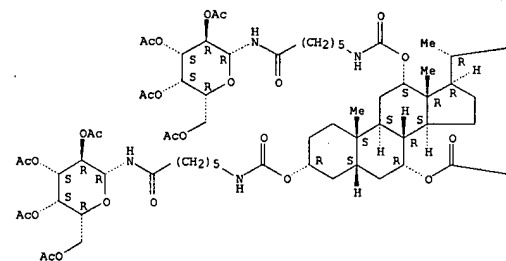
RN 252769-13-4 USPATFULL

CN Choline-3,7,12,24-tetrol, 3,7,12-tris[[6-oxo-6-[(2,3,4,6-tetra-O-acetyl-.beta.-D-galactopyranosyl)amino]hexyl]carbamate], (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

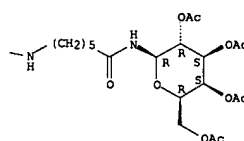
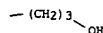
Absolute stereochemistry.

L7 ANSWER 5 OF 5 USPATFULL (Continued)

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RN 252769-14-5 USPATFULL

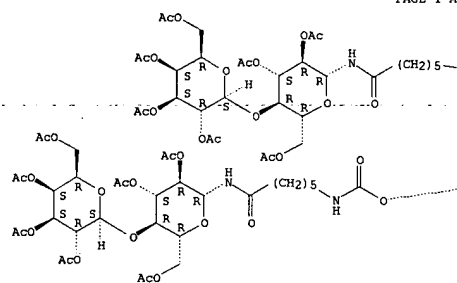
CN Choline-3,7,12,24-tetrol, 3,7,12-tris[[6-oxo-6-[(2,3,6-tri-O-acetyl-4-O-(2,3,4,6-tetra-O-acetyl-.beta.-D-galactopyranosyl)-.beta.-D-glucopyranosyl)amino]hexyl]carbamate], (3.alpha.,5.beta.,7.alpha.,12.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

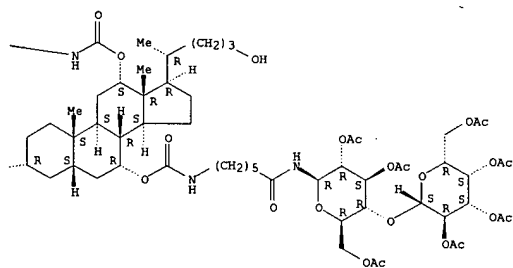


L7 ANSWER 5 OF 5 USPATFULL (Continued)

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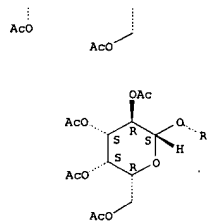
PAGE 1-B



RN 252769-15-6 USPATFULL  
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L7 ANSWER 5 OF 5 USPATFULL (Continued)

PAGE 2-A

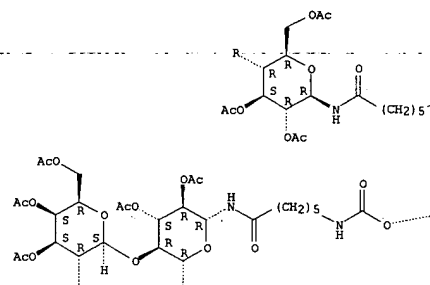


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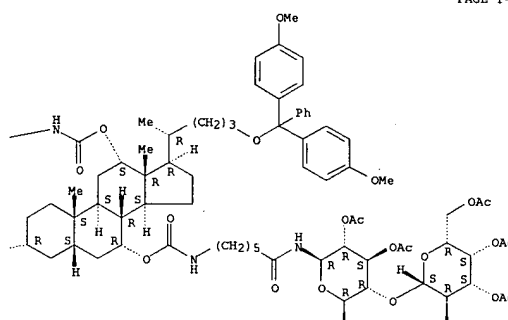


L7 ANSWER 5 OF 5 USPATFULL (Continued)  
 Absolute stereochemistry.

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(FILE 'HOME' ENTERED AT 09:00:46 ON 03 MAR 2003)

FILE 'REGISTRY' ENTERED AT 09:00:54 ON 03 MAR 2003

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L3       50 S L1 SUB=L2 SAM  
L4       QUE L1  
L5       STRUCTURE UPLOADED  
L6       129 S L5 FULL

FILE 'USPATFULL' ENTERED AT 09:07:46 ON 03 MAR 2003

L7       5 S L6

FILE 'CAPLUS' ENTERED AT 09:10:41 ON 03 MAR 2003

L8       16 S L6  
L9       0 S L8 NOT L7

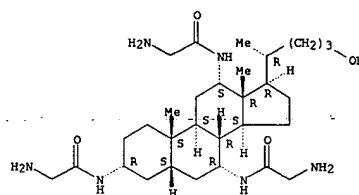
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L4 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2003 ACS  
 ACCESSION NUMBER: 2002:522683 CAPLUS  
 DOCUMENT NUMBER: 137:79113  
 TITLE: Preparation of steroid derived antibiotics  
 INVENTOR(S): Savage, Paul B.; Li, Chunhong  
 PATENT ASSIGNEE(S): USA  
 SOURCE: U.S. Pat. Appl. Publ., 62 pp., Cont.-in-part of U.S. Ser. No. 234,008.  
 CODEN: USXXCO  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 4  
 PATENT INFORMATION:

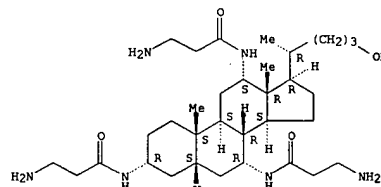
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002091278	A1	20020711	US 2001-930316	20010815
WO 9944616	A1	19990910	WO 1998-US4489	19980306
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, A2, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG US 6350738 B1 20020226 US 1999-234008 19990119 PRIORITY APPLN. INFO.: WO 1998-US4489 A2 19980306 US 1999-234008 A2 19990119 US 2000-225467P P 20000815				

OTHER SOURCE(S): MARPAT 137:79113  
 AB Novel steroid derivs. of formula I (R1-R4, R6, R7, R11, R12, R15-R17 = H, OH, alkyl, hydroxyalkyl, alkoxy, alkylamino, aryl, etc.; R5, R8-R10, R13, R14 = H, OH, alkyl, hydroxyalkyl, aminoalkyl, aryl, etc.) are prepd. The steroid derivs. are antibacterial agents. The steroid derivs. also act to sensitize bacteria to other antibiotics including erythromycin and novobiocin. Thus, II was prepd. from Me cholate, allyl bromide and benzylmethylamine in several steps. The prepd. compds. were tested against Gram-neg. bacteria.  
 IT 222165-26-6P 222165-33-5P 222165-39-1P  
 222165-44-8P 222165-50-6P  
 RI: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (prepn. of steroid derivs. as antibiotics)  
 RN 222165-26-6 CAPLUS  
 CN Acetamide, N,N',N''-[(3.alpha.,5.beta.,7.alpha.,12.alpha.)-24-hydroxycholeane-3,7,12-triyl]tris[2-amino- (9CI) (CA INDEX NAME)  
 Absolute stereochemistry.

L4 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2003 ACS (Continued)

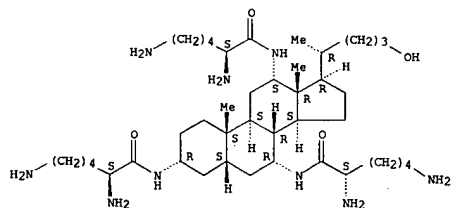


RN 222165-33-5 CAPLUS  
 CN Propanamide, N,N',N''-[(3.alpha.,5.beta.,7.alpha.,12.alpha.)-24-hydroxycholeane-3,7,12-triyl]tris[3-amino- (9CI) (CA INDEX NAME)  
 Absolute stereochemistry.

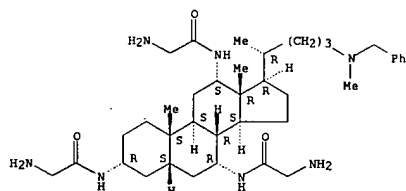


RN 222165-39-1 CAPLUS  
 CN Hexanamide, N,N',N''-[(3.alpha.,5.beta.,7.alpha.,12.alpha.)-24-hydroxycholeane-3,7,12-triyl]tris[2,6-diamino-, (2S,2'S,2''S)- (9CI) (CA INDEX NAME)  
 Absolute stereochemistry.

L4 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2003 ACS (Continued)

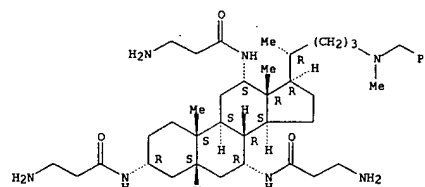


RN 222165-44-8 CAPLUS  
 CN Acetamide, N,N',N''-[(3.alpha.,5.beta.,7.alpha.,12.alpha.)-24-[methyl(phenylmethyl)amino]choleane-3,7,12-triyl]tris[2-amino- (9CI) (CA INDEX NAME)  
 Absolute stereochemistry.



RN 222165-50-6 CAPLUS  
 CN Propanamide, N,N',N''-[(3.alpha.,5.beta.,7.alpha.,12.alpha.)-24-[methyl(phenylmethyl)amino]choleane-3,7,12-triyl]tris[3-amino- (9CI) (CA INDEX NAME)  
 Absolute stereochemistry.

L4 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2003 ACS (Continued)



L4 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2003 ACS  
 ACCESSION NUMBER: 2002:142730 CAPLUS  
 DOCUMENT NUMBER: 136:200350  
 TITLE: Preparation of steroid derived antibiotics  
 INVENTOR(S): Savage, Paul B.; Li, Chunhong  
 PATENT ASSIGNEE(S): Brigham Young University, USA  
 SOURCE: PCT Int. Appl., 128 pp.  
 CODEN: PIXX02  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 4  
 PATENT INFORMATION:

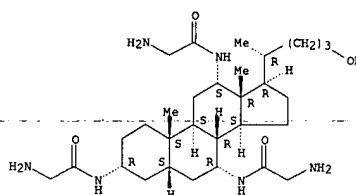
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002014342	A1	20020221	WO 2001-US25532	20010815
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OTHER SOURCE(S): MARPAT 136:200350  
 AB Novel steroid derivs., such as I (R1-R4, R6, R7, R11, R12, R15-R17 = H, OH, alkyl, hydroxyalkyl, alkoxyalkyl, alkylcarboxyalkyl aminoalkyl, oxo, steroid, etc.; R5, R8-R10, R13, R14 = H, OH, alkyl, hydroxyalkyl, alkoxyalkyl, aryl, aminoalkoxy, etc.), or a pharmaceutically acceptable salt thereof, are prepd. for use as antibacterial agents. The steroid derivs. also act to sensitize bacteria to other antibiotics including erythromycin and novobiocin. Thus, Me cholate was converted into steroid deriv. II in many steps. The MIC value of II against E. coli (ATCC 10798) was 2 .mu.g/mL

IT 222165-26-6P 222165-33-5P 222165-44-8P  
 222165-50-6P 222165-56-2P 222165-79-9P  
 RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (prepn. of steroidal antibiotics)  
 RN 222165-26-6 CAPLUS  
 CN Acetamide, N,N',N''-[(3.alpha.,5.beta.,7.alpha.,12.alpha.)-24-hydroxycholane-3,7,12-triyl]tris[2-amino- (9CI) (CA INDEX NAME)]

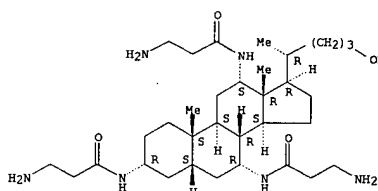
Absolute stereochemistry.

L4 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2003 ACS (Continued)



RN 222165-33-5 CAPLUS  
 CN Propanamide, N,N',N''-[(3.alpha.,5.beta.,7.alpha.,12.alpha.)-24-hydroxycholane-3,7,12-triyl]tris[3-amino- (9CI) (CA INDEX NAME)]

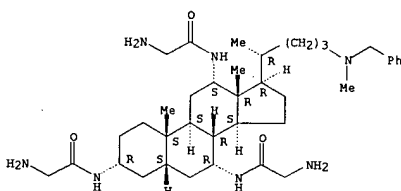
Absolute stereochemistry.



RN 222165-44-8 CAPLUS  
 CN Acetamide, N,N',N''-[(3.alpha.,5.beta.,7.alpha.,12.alpha.)-24-methyl(phenylmethyl)amino]cholane-3,7,12-triyl]tris[2-amino- (9CI) (CA INDEX NAME)]

Absolute stereochemistry.

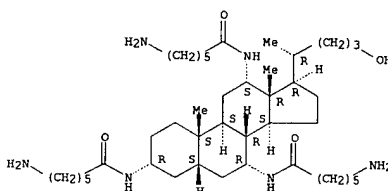
L4 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2003 ACS (Continued)



RN 222165-50-6 CAPLUS  
 CN Propanamide, N,N',N''-[(3.alpha.,5.beta.,7.alpha.,12.alpha.)-24-methyl(phenylmethyl)amino]cholane-3,7,12-triyl]tris[3-amino- (9CI) (CA INDEX NAME)]

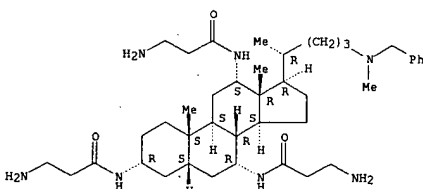
Absolute stereochemistry.

L4 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2003 ACS (Continued)



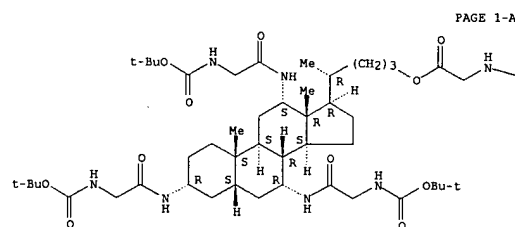
RN 222165-79-9 CAPLUS  
 CN Glycine, N-[(1,1-dimethylethoxy)carbonyl]-, (3.alpha.,5.beta.,7.alpha.,12.alpha.)-3,7,12-tris[(((1,1-dimethylethoxy)carbonyl)amino]acetyl]amino]cholesterol-24-yl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 222165-56-2 CAPLUS  
 CN Hexanamide, N,N',N''-[(3.alpha.,5.beta.,7.alpha.,12.alpha.)-24-hydroxycholane-3,7,12-triyl]tris[6-amino- (9CI) (CA INDEX NAME)]

Absolute stereochemistry.



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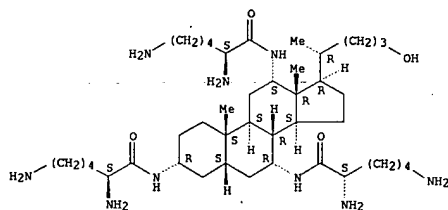


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IT 222165-39-1P 222165-83-5P 222165-89-1P  
 222165-96-0P 222165-99-3P 222166-04-3P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (prepn. of steroidal antibiotics)  
 RN 222165-39-1 CAPLUS  
 CN Hexanamide, N,N',N''-[(3.alpha.,5.beta.,7.alpha.,12.alpha.)-24-hydroxycholane-3,7,12-triyl]tris[2,6-diamino-, (2S,2'S,2''S)- (9CI) (CA INDEX NAME)]

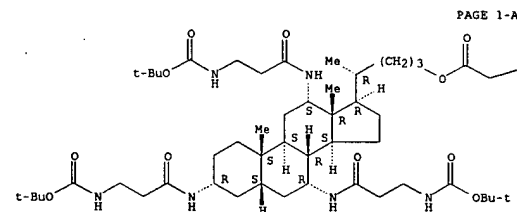
L4 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2003 ACS (Continued)  
INDEX NAME)

Absolute stereochemistry.

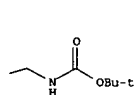


RN 222165-83-5 CAPLUS  
CN .beta.-Alanine, N-[(1,1-dimethylethoxy)carbonyl]-, (3.alpha.,5.beta.,7.alpha.,12.alpha.)-3,7,12-tris[[(1,1-dimethylethoxy)carbonyl]amino]-1-oxopropyl]amino]cholan-24-yl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



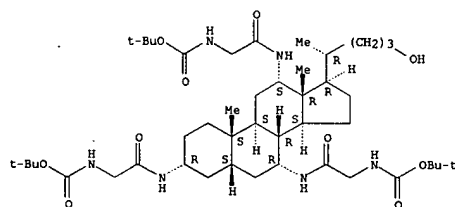
PAGE 1-A



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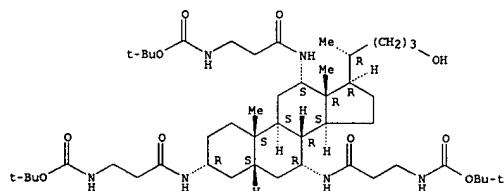
RN 222165-89-1 CAPLUS

L4 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2003 ACS (Continued)  
Absolute stereochemistry.



RN 222165-99-3 CAPLUS  
CN Carbamic acid, [(3.alpha.,5.beta.,7.alpha.,12.alpha.)-24-hydroxycholeane-3,7,12-triyl]tris[imino(3-oxo-3,1-propanediyl)]]tris-, tris(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

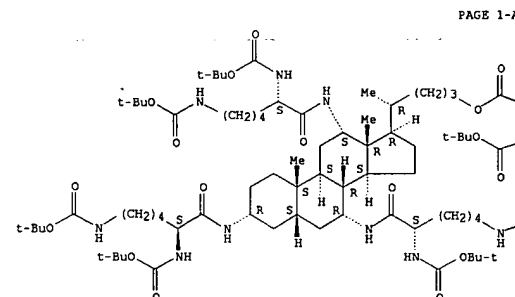


RN 222166-04-3 CAPLUS  
CN Carbamic acid, [(3.alpha.,5.beta.,7.alpha.,12.alpha.)-24-hydroxycholeane-3,7,12-triyl]tris[imino(28)-1-oxo-1,2,6-hexanetriyl]]]hexakis-, hexakis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)

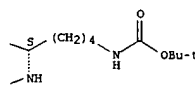
Absolute stereochemistry.

L4 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2003 ACS (Continued)  
CN L-Lysine, N2,N6-bis[(1,1-dimethylethoxy)carbonyl]-, (3.alpha.,5.beta.,7.alpha.,12.alpha.)-3,7,12-tris[[(2S)-2,6-bis[(1,1-dimethylethoxy)carbonyl]amino]-1-oxohexyl]amino]cholan-24-yl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



PAGE 1-A



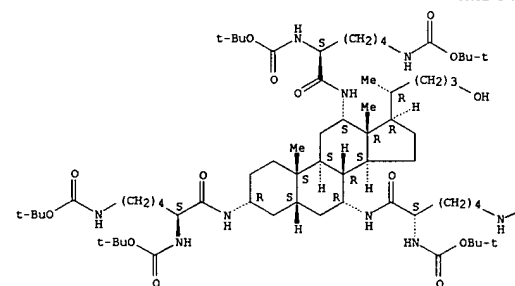
PAGE 1-B



RN 222165-96-0 CAPLUS  
CN Carbamic acid, [(3.alpha.,5.beta.,7.alpha.,12.alpha.)-24-hydroxycholeane-3,7,12-triyl]tris[imino(2-oxo-2,1-ethanediyl)]]tris-, tris(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)

L4 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2003 ACS (Continued)

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PAGE 1-B



REFERENCE COUNT:

1

THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2003 ACS  
 ACCESSION NUMBER: 2000:679602 CAPLUS  
 DOCUMENT NUMBER: 133:362882  
 TITLE: Preparation of a Protected Triamino Analogue of Cholic Acid and Sequential Incorporation of Amino Acids in Solution and on a Solid Support  
 AUTHOR(S): Zhou, Xiao-Ti; Atiq-ur Rehman; Li, Chunhong; Savage, Paul B.  
 CORPORATE SOURCE: Department of Chemistry and Biochemistry, Brigham Young University, Provo, UT, 84602, USA  
 SOURCE: Organic Letters (2000), 2(19), 3015-3018  
 CODEN: ORLEF7; ISSN: 1523-7060  
 PUBLISHER: American Chemical Society  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 133:362882

AB The authors have prepd. a triamino deriv. of cholic acid with protecting groups on the amines that allow sequential amide formation. The triamino was formed from 3.alpha.,7.alpha.,12.alpha.-trihydroxycholesterol-24-ol with good stereoselectivity. Sequential removal of the amine protecting groups and amide formation was achieved in high-yielding steps and was performed in soln. and on a solid support.

IT 307950-87-4DP, resin-bound 307950-96-5P

307951-07-1P

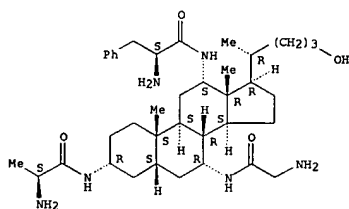
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. of a protected triamino analog of cholic acid and sequential incorporation of amino acids in soln. and on a solid support)

RN 307950-87-4 CAPLUS

CN Benzenepropanamide, .alpha.-amino-N-[(3.alpha.,5.beta.,7.alpha.,12.alpha.)-7-[(aminoacetyl)amino]-3-[(2S)-2-amino-1-oxopropyl]amino]-24-hydroxycholesterol-12-yl]-, (.alpha.S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

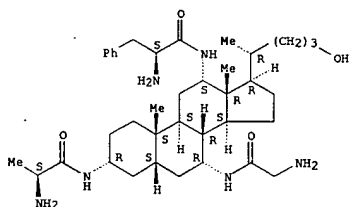


RN 307950-96-5 CAPLUS

CN Carbamic acid, [(1S)-2-[[[(3.alpha.,5.beta.,7.alpha.,12.alpha.)-24-(benzoyloxy)-7-[[[(1,1-dimethylethoxy)carbonyl]amino]acetyl]amino]-12-[(2S)-2-[[[(1,1-dimethylethoxy)carbonyl]amino]-1-oxo-3-phenylpropyl]amino]cholesterol-3-yl]amino]-1-methyl-2-oxoethyl]-, (.alpha.S)- (9CI) (CA INDEX NAME)

L4 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2003 ACS (Continued)

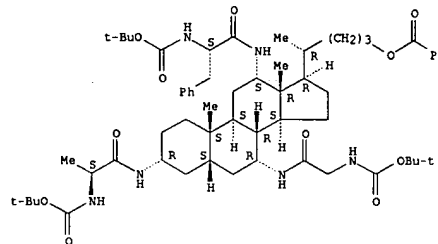
Absolute stereochemistry.



REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2003 ACS (Continued)  
 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

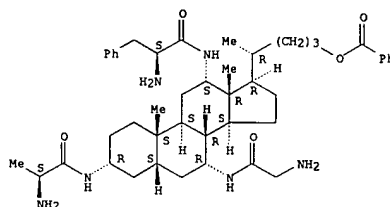
Absolute stereochemistry.



RN 307951-07-1 CAPLUS

CN Benzenepropanamide, .alpha.-amino-N-[(3.alpha.,5.beta.,7.alpha.,12.alpha.)-7-[(aminoacetyl)amino]-3-[(2S)-2-amino-1-oxopropyl]amino]-24-(benzoyloxy)cholesterol-12-yl]-, (.alpha.S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 307950-87-4P

RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of a protected triamino analog of cholic acid and sequential incorporation of amino acids in soln. and on a solid support)

RN 307950-87-4 CAPLUS

CN Benzenepropanamide, .alpha.-amino-N-[(3.alpha.,5.beta.,7.alpha.,12.alpha.)-7-[(aminoacetyl)amino]-3-[(2S)-2-amino-1-oxopropyl]amino]-24-hydroxycholesterol-12-yl]-, (.alpha.S)- (9CI) (CA INDEX NAME)

L4 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2000:493560 CAPLUS

DOCUMENT NUMBER: 133:120505

TITLE: synthesis and antibacterial activity of cholanolic acid analogs

INVENTOR(S): Savage, Paul B.; Li, Chunhong

PATENT ASSIGNEE(S): Brigham Young University, USA

SOURCE: PCT Int. Appl., 107 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 4

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000042058	A1	20000720	WO 2000-US1314	20000119
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6350738	B1	20020226	US 1999-234008	19990119
CA 2360060	AA	20000720	CA 2000-2360060	20000119
EP 1144432	A1	20011017	EP 2000-905672	20000119
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2002534532	T2	20021015	JP 2000-593625	20000119
PRIORITY APPLN. INFO:				
US 1999-234008 A1 19990119				
WO 1998-US4489 A2 19980306				
WO 2000-US1314 W 20000119				

OTHER SOURCE(S): MARPAT 133:120505

AB A series of novel steroid derivs. (I) [R1 = (un)substituted NH2, NHC(=NH)NH2; R2 = (un)substituted NH2, (un)substituted OH; n = 1, 2] are synthesized and tested as antibacterial agents. Thus, I [R1 = NH2; R2 = N(CH2Ph)Me; n = 2] (II) was prepd. from Me cholate by acid reduct. to alc. followed by alc. tritylation and allylation followed by reductive hydroxylation, azidation, deprotection, mesylation, amination and azide reduct. The steroid derivs. also act to sensitize bacteria to other antibiotics including erythromycin and novobiocin and II shows an MIC of 4 mu.g/mL with erythromycin and novobiocin against P. aureginosa.

IT 222165-26-6 222165-33-5 222165-39-1

222165-44-8 222165-50-6

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)

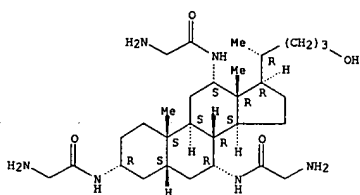
(synthesis and antibacterial activity of cholanolic acid analogs)

RN 222165-26-6 CAPLUS

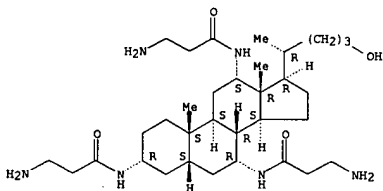
CN Acetamide, N,N',N''-[(3.alpha.,5.beta.,7.alpha.,12.alpha.)-24-hydroxycholesterol-3,7,12-triyl]tris[2-amino- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L4 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2003 ACS (Continued)

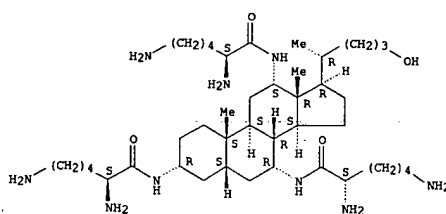


RN 222165-33-5 CAPLUS  
 CN Propanamide, N,N',N''-[(3.alpha.,5.beta.,7.alpha.,12.alpha.)-24-hydroxycholeane-3,7,12-triyl]tris[3-amino- (9CI) (CA INDEX NAME)  
 Absolute stereochemistry.

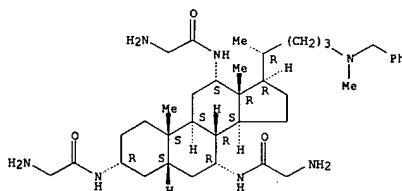


RN 222165-39-1 CAPLUS  
 CN Hexanamide, N,N',N''-[(3.alpha.,5.beta.,7.alpha.,12.alpha.)-24-hydroxycholeane-3,7,12-triyl]tris[2,6-diamino-, (2S,2'S,2'')- (9CI) (CA INDEX NAME)  
 Absolute stereochemistry.

L4 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2003 ACS (Continued)

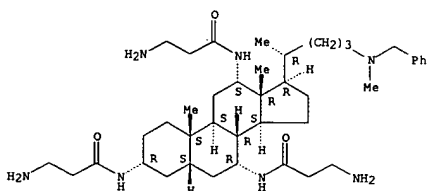


RN 222165-44-8 CAPLUS  
 CN Acetamide, N,N',N''-[(3.alpha.,5.beta.,7.alpha.,12.alpha.)-24-[methyl(phenylmethyl)amino]choleane-3,7,12-triyl]tris[2-amino- (9CI) (CA INDEX NAME)  
 Absolute stereochemistry.

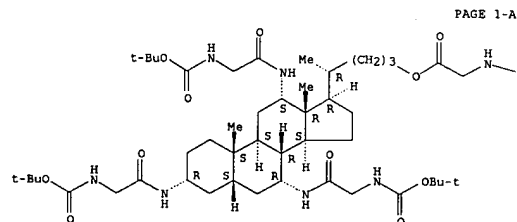


RN 222165-50-6 CAPLUS  
 CN Propanamide, N,N',N''-[(3.alpha.,5.beta.,7.alpha.,12.alpha.)-24-[methyl(phenylmethyl)amino]choleane-3,7,12-triyl]tris[2-amino- (9CI) (CA INDEX NAME)  
 Absolute stereochemistry.

L4 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2003 ACS (Continued)



IT 222165-79-9P 222165-83-5P 222165-89-1P  
 222165-96-0P 222165-99-3P 222166-04-3P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (synthesis and antibacterial activity of cholanolic acid analogs)  
 RN 222165-79-9 CAPLUS  
 CN Glycine, N-[(1,1-dimethylethoxy)carbonyl]-, (3.alpha.,5.beta.,7.alpha.,12.alpha.)-3,7,12-tris[[(1,1-dimethylethoxy)carbonyl]amino]acetyl]amino]choleane-24-yl ester (9CI) (CA INDEX NAME)  
 Absolute stereochemistry.



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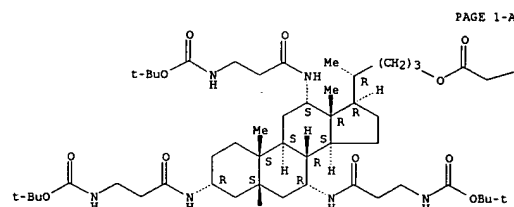


PAGE 1-B



RN 222165-83-5 CAPLUS  
 CN .beta.-Alanine, N-[(1,1-dimethylethoxy)carbonyl]-, (3.alpha.,5.beta.,7.alpha.,12.alpha.)-3,7,12-tris[[(1,1-

L4 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2003 ACS (Continued)  
 dimethylethoxy]carbonyl]amino]-1-oxopropyl]amino]choleane-24-yl ester (9CI) (CA INDEX NAME)  
 Absolute stereochemistry.



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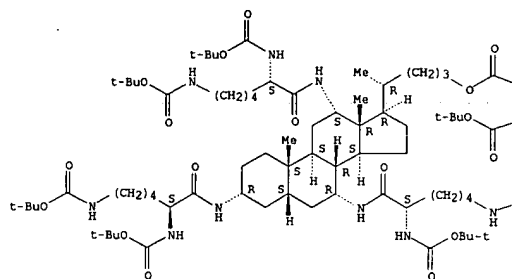
PAGE 1-B

RN 222165-89-1 CAPLUS  
 CN L-Lysine, N2,N6-bis[(1,1-dimethylethoxy)carbonyl]-, (3.alpha.,5.beta.,7.alpha.,12.alpha.)-3,7,12-tris[[(1,1-dimethylethoxy)carbonyl]amino]-1-oxohexyl]amino]choleane-24-yl ester (9CI) (CA INDEX NAME)  
 Absolute stereochemistry.

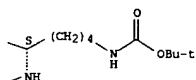


L4 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2003 ACS (Continued)

PAGE 1-A



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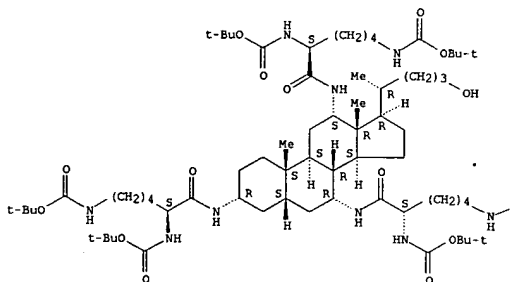


RN 222165-96-0 CAPLUS  
 CN Carbamic acid, [[[(3.alpha.,5.beta.,7.alpha.,12.alpha.)-24-hydroxycholeane-3,7,12-triyl]tris[imino(2-oxo-2,1-ethanediyl)]]]tris-, tris(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L4 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2003 ACS (Continued)

PAGE 1-A

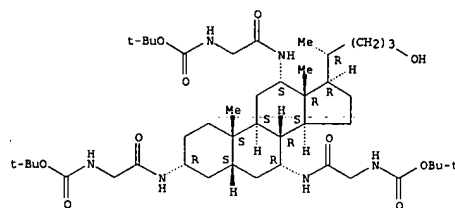


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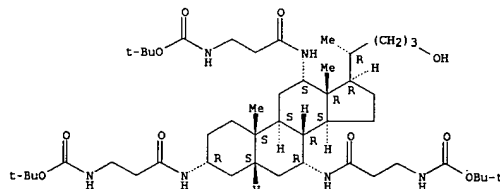
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L4 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2003 ACS (Continued)



RN 222165-99-3 CAPLUS  
 CN Carbamic acid, [[[(3.alpha.,5.beta.,7.alpha.,12.alpha.)-24-hydroxycholeane-3,7,12-triyl]tris[imino(3-oxo-3,1-propanediyl)]]]tris-, tris(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 222166-04-3 CAPLUS  
 CN Carbamic acid, [[[(3.alpha.,5.beta.,7.alpha.,12.alpha.)-24-hydroxycholeane-3,7,12-triyl]tris[imino(2-oxo-2,1-ethanediyl)]]]tris-, tris(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L4 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1999:180651 CAPLUS

DOCUMENT NUMBER: 130:26720

TITLE: Preparation of amino acid-appended cholic acid derivatives as sensitizers of Gram-negative bacteria  
 AUTHOR(S): Atiq-ur-Rehman; Li, Chunhong; Budge, Loren P.; Street, Sarah E.; Savage, Paul B.

CORPORATE SOURCE: Department of Chemistry and Biochemistry, Brigham Young University, Provo, UT, 84602, USA

SOURCE: Tetrahedron Letters (1999), 40(10), 1865-1868

CODEN: TELEAY; ISSN: 0040-4039

PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Attachment of amino acids to cholic acid derivs. yielded compds. that sensitize Gram-neg. bacteria to hydrophobic antibiotics. Incorporation of amino acids onto cholic acid derivs. via ester bonds was only achieved with non- $\alpha$ -branched amino acids, such as glycine and  $\beta$ -alanine. However, both non- $\alpha$ -branched and  $\alpha$ -branched amino acids, such as glycine,  $\beta$ -alanine and lysine, were coupled to the steroid backbone via amide bonds.

IT 222165-26-6P 222165-33-5P 222165-39-1P

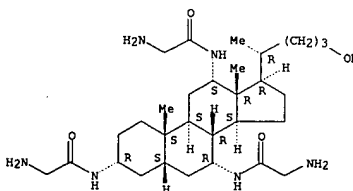
222165-44-6P 222165-50-6P 222165-56-2P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)  
 (prepn. of amino acid-contg. cholic acids that sensitize Gram-neg. bacteria to hydrophobic antibiotics)

RN 222165-26-6 CAPLUS

CN Acetamide, N,N',N''-[(3.alpha.,5.beta.,7.alpha.,12.alpha.)-24-hydroxycholeane-3,7,12-triyl]tris[2-amino- (9CI) (CA INDEX NAME)

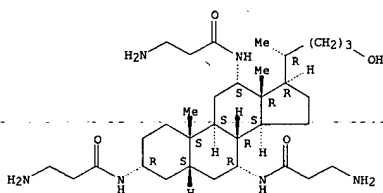
Absolute stereochemistry.



RN 222165-33-5 CAPLUS  
 CN Propanamide, N,N',N''-[(3.alpha.,5.beta.,7.alpha.,12.alpha.)-24-hydroxycholeane-3,7,12-triyl]tris[3-amino- (9CI) (CA INDEX NAME)

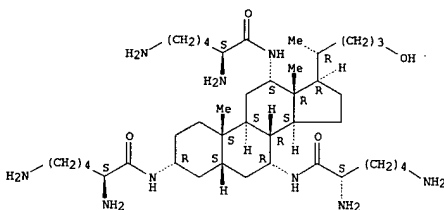
Absolute stereochemistry.

L4 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2003 ACS (Continued)



RN 222165-39-1 CAPLUS  
 CN Hexanamide, N,N',N''-[(3.alpha.,5.beta.,7.alpha.,12.alpha.)-24-hydroxycholane-3,7,12-triyl]tris[2,6-diamino-, (2S,2'S,2'')S)- (9CI) (CA INDEX NAME)

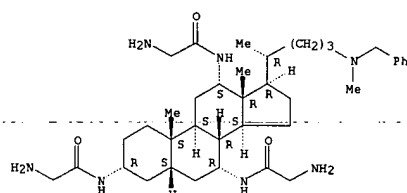
Absolute stereochemistry.



RN 222165-44-8 CAPLUS  
 CN Acetamide, N,N',N''-[(3.alpha.,5.beta.,7.alpha.,12.alpha.)-24-[methyl(phenylmethyl)amino]cholane-3,7,12-triyl]tris[2-amino- (9CI) (CA INDEX NAME)

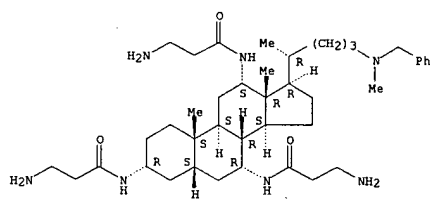
Absolute stereochemistry.

L4 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2003 ACS (Continued)



RN 222165-50-6 CAPLUS  
 CN Propanamide, N,N',N''-[(3.alpha.,5.beta.,7.alpha.,12.alpha.)-24-[methyl(phenylmethyl)amino]cholane-3,7,12-triyl]tris[3-amino- (9CI) (CA INDEX NAME)

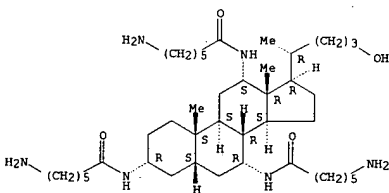
Absolute stereochemistry.



RN 222165-56-2 CAPLUS  
 CN Hexanamide, N,N',N''-[(3.alpha.,5.beta.,7.alpha.,12.alpha.)-24-hydroxycholane-3,7,12-triyl]tris[6-amino- (9CI) (CA INDEX NAME)

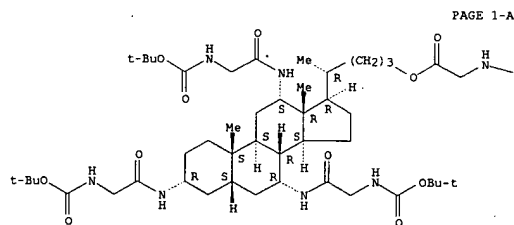
Absolute stereochemistry.

L4 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2003 ACS (Continued)



IT 222165-79-9P 222165-83-5P 222165-89-1P  
 222165-96-0P 222165-99-3P 222166-04-3P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (prepn. of amino acid-contg. cholic acids that sensitize Gram-neg. bacteria to hydrophobic antibiotics)  
 RN 222165-79-9 CAPLUS  
 CN Glycine, N-[(1,1-dimethylethoxy)carbonyl]-, (3.alpha.,5.beta.,7.alpha.,12.alpha.)-3,7,12-tris[[(1,1-dimethylethoxy)carbonyl]amino]acetyl]amino]cho lan-24-yl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



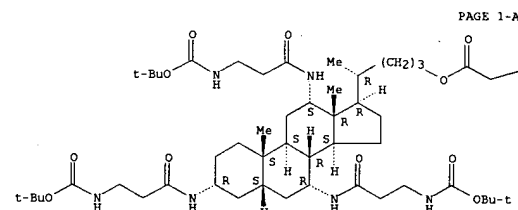
PAGE 1-A



RN 222165-83-5 CAPLUS  
 CN .beta.-Alanine, N-[(1,1-dimethylethoxy)carbonyl]-.

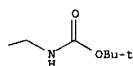
L4 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2003 ACS (Continued)  
 (3.alpha.,5.beta.,7.alpha.,12.alpha.)-3,7,12-tris[[(1,1-dimethylethoxy)carbonyl]amino]-1-oxopropyl]amino]cho lan-24-yl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



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PAGE 1-B

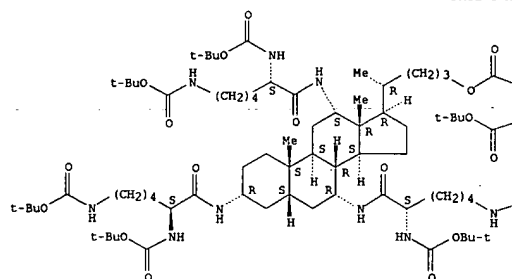


RN 222165-89-1 CAPLUS  
 CN L-Lysine, N2,N6-bis[(1,1-dimethylethoxy)carbonyl]-, (3.alpha.,5.beta.,7.alpha.,12.alpha.)-3,7,12-tris[[(1,1-dimethylethoxy)carbonyl]amino]-1-oxohexyl]amino]cho lan-24-yl ester (9CI) (CA INDEX NAME)

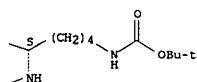
Absolute stereochemistry.

L4 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2003 ACS (Continued)

PAGE 1-A



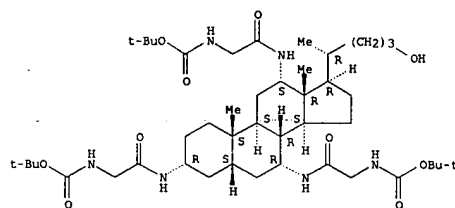
PAGE 1-B



RN 222165-96-0 CAPLUS  
 CN Carbamic acid, [[[(3.alpha.,5.beta.,7.alpha.,12.alpha.)-24-hydroxycholane-3,7,12-triyl]tris[imino(2-oxo-2,1-ethanediyl)]]tris-, tris(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)]

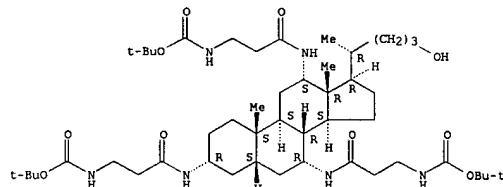
Absolute stereochemistry.

L4 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2003 ACS (Continued)



RN 222165-99-3 CAPLUS  
 CN Carbamic acid, [[[(3.alpha.,5.beta.,7.alpha.,12.alpha.)-24-hydroxycholane-3,7,12-triyl]tris[imino(3-oxo-3,1-propanediyl)]]tris-, tris(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)]

Absolute stereochemistry.

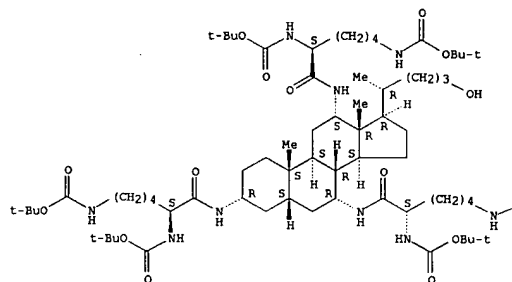


RN 222166-04-3 CAPLUS  
 CN Carbamic acid, [[[(3.alpha.,5.beta.,7.alpha.,12.alpha.)-24-hydroxycholane-3,7,12-triyl]tris[imino((2S)-1-oxo-1,2,6-hexanetriyl)]]hexakis-, hexakis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)]

Absolute stereochemistry.

L4 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2003 ACS (Continued)

PAGE 1-A



PAGE 1-B



REFERENCE COUNT:

12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

09/930,316

Page 10

=> d ibib ab fqhit 1-7

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L9 ANSWER 1 OF 7 MARPAT COPYRIGHT 2003 ACS  
 ACCESSION NUMBER: 137:155109 MARPAT  
 TITLE: Preparation of steroid derivatives for treating  
 hypocholesterolemia  
 INVENTOR(S): Liao, Shutsung; Song, Ching  
 PATENT ASSIGNEE(S): USA  
 SOURCE: U.S. Pat. Appl. Publ., 7 pp.  
 CODEN: USXXCO  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002107233	A1	20020808	US 2002-72128	20020208
WO 2002062302	A2	20020815	WO 2002-US3826	20020207

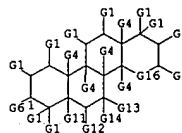
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RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2001-267493P 20010208  
 AB The steroid derivs. I (R1, R2, R4, R4', R7, R11, R12, R15, R16, R17, R17' = H, OH, amino, carbonyl, oxo, halo, sulfonic acid, -O-sulfonic acid, or alkyl that is optionally inserted with Y: Y = -NH-, -N(alkyl)-, -O-, -S-, -SO-, -SO2-, -O-SO2-, -SO2-O-, -SO3-O-, -CO-, -CO-O-, -O-CO-, -CO-NH-, -CO-N(alkyl)-, -NH-CO-, or -N(alkyl)-CO-, and further optionally substituted with OH, halo, amino, carbonyl, sulfonic acid, or -O-sulfonic acid; R3 = X-Y; X = H, amino, carbonyl, halo, sulfonic acid, -O-sulfonic acid, alkyl; R5R6 = O, double bond; R8, R9, R10, R13, R14 = H, alkyl, haloalkyl, hydroxyalkyl, alkoxy, hydroxy, amino; n = 0-2), or their salts were prepd. Thus, 5.alpha., 6.alpha.-epoxycholesterol-3-sulfate (II) was prepd. by the reaction of 5.alpha., 6.alpha.-epoxy-3.beta.-hydroxycholestan-3-ol and tri-ethylamine-sulfur trioxide complex (also prepd.). Also disclosed are a method of treating hypocholesterolemia and a method of screening for an LXR agonist by administering I, a pharmaceutical compn. contg. at least one of the compds. described above, and an antibody against II or 7-ketocholesterol-3-sulfate.

MSTR 1

L9 ANSWER 1 OF 7 MARPAT COPYRIGHT 2003 ACS (Continued)



G2 = 32

G17

G5 = NH2

G7 = 65-1 66-53

G10-C(=O)

65 66

G8 = NH2

G10 = NH

G17 = alkyl&lt;(1-18)&gt; (SO (1-1) G5)

MPL: claim 1

NTE: substitution is restricted

L9 ANSWER 2 OF 7 MARPAT COPYRIGHT 2003 ACS  
 ACCESSION NUMBER: 137:79113 MARPAT  
 TITLE: Preparation of steroid derived antibiotics  
 INVENTOR(S): Savage, Paul B.; Li, Chunhong  
 PATENT ASSIGNEE(S): USA  
 SOURCE: U.S. Pat. Appl. Publ., 62 pp., Cont.-in-part of U.S. Ser. No. 234,008.  
 CODEN: USXXCO  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 4  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002091278	A1	20020711	US 2001-930316	20010815
WO 9944616	A1	19990910	WO 1998-US4489	19980306

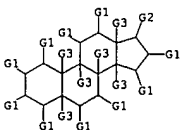
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, BG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

US 6350738	B1	20020226	US 1999-234008	19990119
			WO 1998-US4489	19980306
			US 1999-234008	19990119
			US 2000-225467P	20000815

PRIORITY APPLN. INFO.:  
 AB Novel steroid derivs. of formula I (R1-R4, R6, R7, R11, R12, R15-R17 = H, OH, alkyl, hydroxyalkyl, alkoxy, alkylamino, aryl, etc.; R5, R8-R10, R13, R14 = H, OH, alkyl, hydroxyalkyl, aminoalkyl, aryl, etc.) are prepd. The steroid derivs. are antibacterial agents. The steroid derivs. also act to sensitize bacteria to other antibiotics including erythromycin and novobiocin. Thus, II was prepd. from Me cholate, allyl bromide and benzylmethylamine in several steps. The prepd. compds. were tested against Gram-neg. bacteria.

MSTR 1



G1 = 132

G16-NH-G15

G16 = alkylene&lt;(1-10)&gt; (SO)

MPL: claim 1

NTE: or pharmaceutically acceptable salts

L9 ANSWER 2 OF 7 MARPAT COPYRIGHT 2003 ACS (Continued)

NTE: substitution is restricted

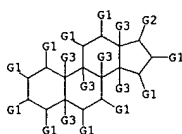
NTE: double bond and oxo formation in steroid ring system also claimed

L9 ANSWER 3 OF 7 MARPAT COPYRIGHT 2003 ACS  
 ACCESSION NUMBER: 136:200350 MARPAT  
 TITLE: Preparation of steroid derived antibiotics  
 INVENTOR(S): Savage, Paul B.; Li, Chunhong  
 PATENT ASSIGNEE(S): Brigham Young University, USA  
 SOURCE: PCT Int. Appl., 128 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 4  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002014342	A1	20020221	WO 2001-US25532	20010815
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2001084934	A5	20020225	AU 2001-84934	20010815
PRIORITY APPLN. INFO.: US 2000-225467P 20000815 WO 2001-US25532 20010815				

AB Novel steroid derivs., such as I (R1-R4, R6, R7, R11, R12, R15-R17 = H, OH, alkyl, hydroxyalkyl, alkoxyalkyl, alkylcarboxyalkyl aminoalkyl, oxo, steroid, etc.; R5, R8-R10, R13, R14 = H, OH, alkyl, hydroxyalkyl, alkoxyalkyl, aryl, aminoalkoxy, etc.), or a pharmaceutically acceptable salt thereof, are prepd. for use as antibacterial agents. The steroid derivs. also act to sensitize bacteria to other antibiotics including erythromycin and novobiocin. Thus, Me cholate was converted into steroid deriv. II in many steps. The MIC value of II against E. coli (ATCC 10798) was 2 .mu.g/mL.

MSTR 1



G1 = 132

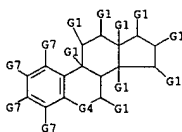
HN-G16-NH-G15  
132

L9 ANSWER 4 OF 7 MARPAT COPYRIGHT 2003 ACS  
 ACCESSION NUMBER: 134:295993 MARPAT  
 TITLE: Estradiol conjugates and their therapeutic applications  
 INVENTOR(S): Stewart, Alastair George; McAllister, David James; Collis, Maree Patricia; Robertson, Alan Duncan  
 PATENT ASSIGNEE(S): University of Melbourne, Australia  
 SOURCE: PCT Int. Appl., 57 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001027132	A1	20010419	WO 2000-AU1244	20001013
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG EP 1226154 A1 20020731 EP 2000-969105 20001013 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
PRIORITY APPLN. INFO.: AU 1999-3425 19991014 WO 2000-AU1244 20001013				

AB The invention discloses the prepn. of conjugated prodrug of estradiol compd. I (R1-R4 = H, OH, halo, alkyl, alkenyl, alkynyl, cycloalkyl, amino, aryl, keto, hydrazono, oximino, carbohydrate, peptide, etc.; m,n,p,q = 0-3), a pharmaceutically acceptable salt or in vivo hydrolyzable ester, amide carbonate or carbamate thereof, in the treatment of conditions assocd. with enhanced angiogenesis or accelerated cell division, such as cancer, and inflammatory conditions such as asthma and rheumatoid arthritis and hyperproliferative skin disorders including psoriasis. Thus, II (R1 = OMe, R2 = H (III)) was prepd. via multi-step reaction sequence starting from .beta.-estradiol II (R1-R2 = H). In human airway fibroblasts thrombin-stimulated increases in cell no. were reduced to 12 +/- 8% of the control response by III.

MSTR 1

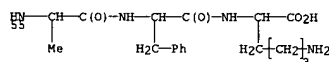


G1 = 55

L9 ANSWER 3 OF 7 MARPAT COPYRIGHT 2003 ACS (Continued)  
 G16 = alkylene<(1-10)>  
 MPL: claim 1  
 NTE: or pharmaceutically acceptable salts  
 NTE: substitution is restricted  
 NTE: optional unsaturation and oxo formation of steroid ring system also claimed

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

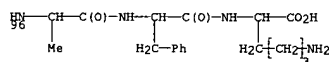
L9 ANSWER 4 OF 7 MARPAT COPYRIGHT 2003 ACS (Continued)



G4 = 33

HC-G1  
33

G7 = 96



MPL: claim 10  
 NTE: or derivatives, pharmaceutically acceptable salts, or in vivo hydrolyzable esters, amides, carbonates, or carbamates  
 NTE: substitution is restricted  
 NTE: also incorporates claim 32, formulas IV, V, and VI

REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

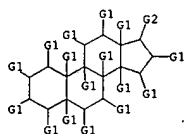
L9 ANSWER 5 OF 7 MARPAT COPYRIGHT 2003 ACS  
 ACCESSION NUMBER: 133:12055 MARPAT  
 TITLE: synthesis and antibacterial activity of cholanolic acid analogs  
 INVENTOR(S): Savage, Paul B.; Li, Chunhong  
 PATENT ASSIGNEE(S): Brigham Young University, USA  
 SOURCE: PCT Int. Appl., 107 pp.  
 CODEN: PIXX02  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 4  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000042058	A1	20000720	WO 2000-US1314	20000119
W:	AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
US 6350738	B1	20020226	US 1999-234008	19990119
CA 2360060	AA	20000720	CA 2000-2360060	20000119
EP 1144432	A1	20010117	EP 2000-905672	20000119
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO			
JP 2002534532	T2	20021015	JP 2000-593625	20000119

PRIORITY APPLN. INFO.:

AB A series of novel steroid derivs. (I) [R1 = (un)substituted NH2, NHC(=NH)NH2; R2 = (un)substituted NH2, (un)substituted OH; n = 1,2] are synthesized and tested as antibacterial agents. Thus, I [R1 = NH2; R2 = N(CH2Ph)Me; n = 2] (II) was prepd. from Me cholate by acid redn. to alc. followed by alc. tritylation and allylation followed by reductive hydroxylation, azidation, deprotection, mesylation, amination and azide redn. The steroid derivs. also act to sensitize bacteria to other antibiotics including erythromycin and novobiocin and II shows an MIC of 4 .mu.g/mL with erythromycin and novobiocin against P. aureginosa.

MPSTR 1



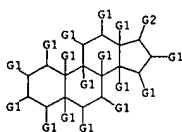
L9 ANSWER 6 OF 7 MARPAT COPYRIGHT 2003 ACS  
 ACCESSION NUMBER: 131:199886 MARPAT  
 TITLE: Preparation of steroid derived antibiotics  
 INVENTOR(S): Savage, Paul B.; Li, Chunhong  
 PATENT ASSIGNEE(S): Brigham Young University, USA  
 SOURCE: PCT Int. Appl., 120 pp.  
 CODEN: PIXX02  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 4  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9944616	A1	19990910	WO 1998-US4489	19980306
W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG			
CA 2322847	AA	19990910	CA 1998-2322847	19980306
AU 9866911	A1	19990920	AU 1998-66911	19980306
EP 1058552	A1	20001213	EP 1998-909028	19980306
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI			
BR 9815711	A	20011113	BR 1998-15711	19980306
JP 2002505292	T2	20020219	JP 2000-534218	19980306
US 6350738	B1	20020226	US 1999-234008	19990119
US 2002019376	A1	20020214	US 2001-927926	20010810
US 6486148	B2	20021126		
US 2002091278	A1	20020711	US 2001-930316	20010815

PRIORITY APPLN. INFO.:

AB Novel steroid derivs. of formula I [R1-R4, R6, R7, R11, R12, R15-R17 = H, OH, alkyl, hydroxyalkyl, aminoalkyl, oxo, steroid, etc.; R5, R8-R10, R13, R14 = H, OH, alkyl, hydroxyalkyl, aryl, oxo, etc.] are prepd. The steroid derivs. are antibacterial agents. The steroid derivs. also act to sensitize bacteria to other antibiotics including erythromycin and novobiocin. Thus, Me cholate was converted into II in many steps. The MIC value of II against E. coli (ATCC 10798) was 2 ug/mL.

MPSTR 1



G1 - 42

L9 ANSWER 5 OF 7 MARPAT COPYRIGHT 2003 ACS (Continued)

G1 - 42

HN-C(O)-G3-G5

42

G3 = alkylene<(1-10)>  
 G5 = NH2 (SO)  
 DER: or pharmaceutically acceptable salts  
 MPL: claim 6  
 NTE: substitution is restricted  
 NTE: optional unsaturation and oxo formation of steroid ring system also claimed

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 6 OF 7 MARPAT COPYRIGHT 2003 ACS (Continued)

HN-C(O)-G3-G5

42

G3 = alkylene<(1-10)>  
 G5 = NH2 (SO)  
 DER: or pharmaceutically acceptable salts  
 MPL: claim 1  
 NTE: substitution is restricted  
 NTE: optional unsaturation and oxo formation of steroid ring system also claimed

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

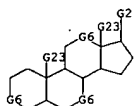
L9 ANSWER 7 OF 7 MARPAT COPYRIGHT 2003 ACS  
 ACCESSION NUMBER: 128:75635 MARPAT  
 TITLE: Preparation of steroidal C-glycosides  
 INVENTOR(S): Anderson, Mark; Musser, John Henry  
 PATENT ASSIGNEE(S): Glycomed Inc., USA  
 SOURCE: U.S., 20 pp.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

L9 ANSWER 7 OF 7 MARPAT COPYRIGHT 2003 ACS (Continued)  
 G10 = NH2  
 MPL: claim 1  
 NTE: substitution is restricted

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5695738	A	19971209	US 1995-490965	19950615
PRIORITY APPLN. INFO.: US 1995-490965 19950615				

AB Steroidal C-glycosides I (R1 = H, alkyl; R2 = alkyl, alkene, CHMe(CH2)<sub>n</sub>CO2H or corresponding esters, amides or salts (n = pos. integer); at least one of R3 is a carbohydrate moiety and the remaining R3 are selected from R1, oxo, sulfate, sulfonate, O-carbohydrate) were prepd. as pharmaceuticals. Thus, 1-[3-O-(lithocholic acid)]-2-(α,β-L-C-methylfuopyranose)-2',3'-propanediol Me ester was prepd. and assayed for antiinflammatory activity. Arachidonic acid-induced inflammation was reduced by 48.5% by topical application of 1 mg of this compd.

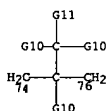
MSR 1



G6 = 35

G20-CH<sub>3</sub>

G7 = NH  
 G8 = 74-31 76-34





=> d his

(FILE 'HOME' ENTERED AT 09:19:26 ON 03 MAR 2003)

FILE 'REGISTRY' ENTERED AT 09:19:33 ON 03 MAR 2003

L1 STRUCTURE UPLOADED

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L3 15 S L1 FULL

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L5 1 S L3

L6 0 S L5 NOT L4

FILE 'MARPAT' ENTERED AT 09:22:26 ON 03 MAR 2003

L7 0 S L3

L8 11 S L3 FULL

L9 7 S L8/COM